TRANSACTIONS

OF THE

THIRD INTERNATIONAL SANITARY CONFERENCE

OF THE

AMERICAN REPUBLICS

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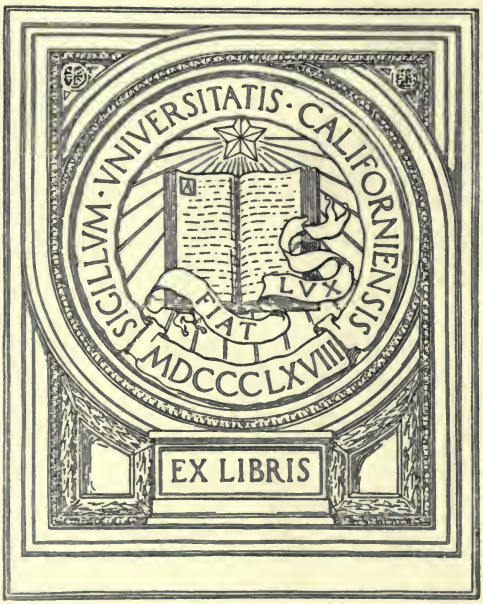

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Dr. J. S. Arnold.
Sept. 17, 1909.

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SPECIAL NOTE.

Mr. John Barrett, the Director of the International Bureau of the American Republics, an institution devoted to the development of comity and commerce among the American nations, and which acts incidentally as the office of the International Sanitary Bureau, presents his compliments to the readers of this volume, and, in expressing the hope that they will enjoy a perusal of its contents, desires to state that if they care for further information concerning the Latin-American Republics they can obtain it by addressing him at the International Bureau offices, Washington, D. C.

TRANSACTIONS OF THE THIRD INTERNATIONAL SANITARY CONFERENCE OF THE AMERICAN REPUBLICS

Pan-American Sanitary
" Conference, 3d, Mexico, 1907.

HELD AT THE NATIONAL
PALACE, CITY OF MEXICO,
DECEMBER 2-3-4-5-6-7, 1907

PUBLISHED AND DISTRIBUTED UNDER THE AUSPICES OF THE
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WASHINGTON, D. C.
1909

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CALL FOR THE FOURTH INTERNATIONAL SANITARY CONVENTION.

In accordance with the resolution adopted at the Third International Sanitary Convention, held in the City of Mexico, December 2-7, 1907, the date December 25, 1909, to January 2, 1910, has been fixed for the assembling of the Fourth International Sanitary Convention in the city of San José, Costa Rica.

The following official correspondence in regard to the call and the provisional program of the convention are printed in the interest of the Convention.

INTERNATIONAL SANITARY BUREAU,

WASHINGTON, U. S. A.

June 12, 1909.

HON. JOHN BARRETT,
Director, Bureau American Republics,
Washington, D. C.

SIR:

In accordance with the resolution adopted at the Second International Sanitary Convention of American Republics authorizing biennial conventions, and in accordance with the action taken at the last convention in Mexico City, December, 1907, I enclose herewith a call for the Fourth International Sanitary Convention of the American Republics to meet in Costa Rica December 25, 1909, to January 2, 1910.

In accordance with paragraph 7 of the resolutions relating to international sanitary police, adopted at the Second International Conference of American States in Mexico, January 29, 1902, I have to request that you take such measures as you deem advisable to make announcement of this call.

It is also requested that the Bureau of American Republics in making this announcement also make representations to the government of Costa Rica in order that there shall be issued through its Department of Foreign Relations invitations to the several countries to be represented.

Respectfully,

WALTER WYMAN,
Chairman, International Sanitary Bureau.

FOURTH INTERNATIONAL SANITARY CONVENTION OF THE AMERICAN REPUBLICS,

TO BE HELD IN SAN JOSÉ, COSTA RICA, DECEMBER 25, 1909, TO JANUARY 2, 1910.

INTERNATIONAL SANITARY BUREAU OF THE AMERICAN REPUBLICS,

WASHINGTON, D. C., *June* 14, 1909.

In accordance with the resolution adopted by the Second International Sanitary Convention of the American Republics, which authorizes biennial conventions, and in accordance with the action taken at the Third International Sanitary Convention, it is hereby announced that the Fourth International

Sanitary Convention of the American Republics will be held in San José, Costa Rica, December 25, 1909, to January 2, 1910.

It is respectfully urged that every Republic of the Western Hemisphere be represented at this convention, both those that have been heretofore represented and those which have not taken part in the previous conventions.

In accordance with resolutions adopted at previous conventions, there will be considered practical means for the adoption of measures intended to obtain the sanitation of cities and especially of ports. This subject has, therefore, been included in the provisional program, which has been prepared by the President-elect of the coming convention with the view to continuing the work of previous conventions.

Provisional Program for the International Sanitary Convention of the American Republics to be Held in San José, Costa Rica, December 25, 1909, to January 2, 1910.

1. Reports presented by the different delegates in regard to the sanitary regulations and laws adopted, and in force, in their respective countries, since the last meeting.
2. Special report by each official delegate regarding the manner in which the resolutions adopted in the three previous conventions have been put into practice, in their respective countries.
3. Reports in regard to sanitary conditions in ports, and measures proposed for the improvement of such sanitary conditions (with special reference to the principal ports).
4. Reports relating to the registration of the movement of population and the rate of mortality in each country, specifying those of ports and principal cities.
5. Sanitation of cities and especially of ports.
6. Measures for the protection of passengers that embark in vessels from infected ports.
7. Discussion of measures against the introduction of diseases not included in the Convention of Washington of 1905.
8. Sanitary models or forms to be adopted by Nations forming part of this Convention.
9. Discussion on sanitary measures relating to Yellow Fever, Bubonic Plague, Tuberculosis, Malaria, and other diseases, in conformity to new discoveries, or experiences.
10. Discussion on measures relating to venereal diseases.
11. Discussion on the necessity of the adoption, by the European Nations, of the Convention of Washington and other sanitary measures subsequently adopted by this Convention with respect to such colonies as they have in America.
12. Discussion on new discoveries with respect to the transmission of yellow fever and malaria, besides the mosquito bite.
13. Organization in each country represented at this Convention, of a commission of three physicians or health officers to act as delegates of the International Sanitary Bureaus of Washington or Montevideo, and to form part of the International Sanitary Information Committee of the American Republics.

By direction of the International Sanitary Bureau of the American Republics.

Walter Wyman,
Chairman.

Juan J. Ulloa,
Secretary.

As requested in the communication of Dr. Walter Wyman, Chairman of the International Sanitary Bureau, the Director of the International Bureau of the American Republics has addressed a letter to the diplomatic representatives of the countries interested in the Convention transmitting a copy of the Call, and the Provisional Program, which has also been given to the press, and will be printed in the Bulletin of the Bureau.

MEMBERS OF THE INTERNATIONAL SANITARY BUREAU OF WASHINGTON.

DR. A. H. DOTY,
United States.

DR. JUAN GUITERAS,
Cuba.

DR. JUAN J. ULLOA,
Costa Rica,
Secretary.

DR. WALTER WYMAN,
United States,
President.

DR. EDUARDO LICÉAGA,
México.

DR. EDUARDO MOORE
Chile.

DR. RHETT GOODE,
United States.

OFFICERS OF THE CONVENTION.

President.

Doctor EDUARDO LICÉAGA, President of the Supreme Board of Health of Mexico.

Vice-Presidents.

Surgeon-General WALTER WYMAN, United States Public Health and Marine-Hospital Service.
Doctor OSWALDO GONÇALVEZ CRUZ, Brazil.
Doctor RICARDO GUTIÉRREZ LEE, Colombia.
Doctor JUAN J. ULLOA, Costa Rica.
Doctor JUAN GUITERAS, Cuba.
Doctor E. SOZA, Chile.
Doctor J. H. ESTEVES, Ecuador.
Doctor SALVADOR ORTEGA, Guatemala.
Doctor LUIS LAZO ARRIAGA, Honduras.
Doctor GREGORIO MENDIZÁBAL, Nicaragua.
Doctor RODOLFO B. GONZÁLEZ, Salvador.
Doctor ERNESTO FERNÁNDEZ ESPIRO, Uruguay.

Permanent Secretary.

Doctor JUAN J. ULLOA, Costa Rica.

Committee on Credentials.

Señor Licenciado Don JOSE ALGARA, Mexico.
Doctor RHETT GOODE, United States.
Doctor SALVADOR ORTEGA, Guatemala.

Advisory Council.

Doctor EDUARDO LICÉAGA, Mexico.
Doctor WALTER WYMAN, United States.
Doctor JUAN J. ULLOA, Costa Rica.
Doctor E. SOZA, Chile.
Doctor R. GUTIÉRREZ LEE, Colombia.

Committee on Yellow Fever.

Doctor JUAN GUITERAS, Cuba.
Doctor R. H. VON EZDORF, United States.
Doctor O. GONÇALVEZ CRUZ, Brazil.
Doctor W. G. OWEN, United States.

Committee on Bubonic Plague.

Doctor P. LAUTARO FERRER, Chile.
Doctor E. LICÉAGA, Mexico.
Doctor P. T. STRAUB, United States.

Committee on Trachoma and Spinal-Cerebral Meningitis.

Doctor JAMES GATEWOOD, United States.
Doctor G. MENDIZÁBAL. Nicaragua.
Doctor H. ROBERTS. Cuba.

Committee on Tuberculosis.

Doctor H. L. E. JOHNSON, United States.
Doctor J. AZURDIA, Guatemala.
Doctor L. LAZO ARRIAGA, Honduras.

Committee on Malaria.

Doctor G. PAYÁN, Colombia.
Doctor R. B. GONZALEZ, Salvador.
Doctor J. H. ESTEVES, Ecuador.

International Sanitary Bureau of the American Republics, Washington, D. C.

Chairman.

Surgeon-General WALTER WYMAN, United States.

Secretary.

Doctor JUAN J. ULLOA, Costa Rica.

Members.

Doctor EDUARDO LICÉAGA, Mexico.
Doctor EDUARDO MOORE, Chile.
Doctor A. H. DOTY, United States.
Doctor JUAN GUITERAS, Cuba.
Doctor RHETT GOODE, United States.

CONVOCATION OF THE THIRD INTERNATIONAL SANITARY CONVENTION.

In accordance with the resolution adopted at the Second International Sanitary Convention held in the City of Washington, October 9-14, 1905, the date of December 2-7, 1907, has been fixed for the assembling of the Third International Sanitary Convention in the City of Mexico.

The Convention is held under authority of resolutions of the Second International Conference of the American States held in the City of Mexico in 1901-2, and of the Third International Conference of American States held in the City of Rio de Janeiro in 1906.

The following official correspondence in regard to the call is herewith promulgated:

INTERNATIONAL SANITARY BUREAU,
WASHINGTON, U. S. A., *June* 18, 1907.

"MR. JOHN BARRETT,
"Director, Bureau American Republics,
"Washington, D. C.

"SIR: In accordance with a resolution adopted at the Second International Sanitary Convention of American Republics, October, 1905, I enclose herewith a call for the Third International Sanitary Convention of the American Republics to meet in the City of Mexico, December 2-7, 1907.

"In accordance with paragraph 7 of the resolutions relating to international sanitary police, adopted at the Second International Conference of American States in Mexico, January 29, 1902, I have to request that you will take such measures as you deem advisable to make announcement of this call.

"It is also requested that the Bureau of American Republics request the Department of State to invite the attention of envoys at this Capital, whose countries have not as yet ratified the Sanitary Convention *ad referendum* of Washington, to the desirability of doing so, and urge them to secure representation at the coming Convention in Mexico City.

"Respectfully,

"WALTER WYMAN,
"Chairman, International Sanitary Bureau."

"THIRD INTERNATIONAL SANITARY CONVENTION OF THE AMERICAN REPUBLICS,
"To be held in the City of Mexico, December 2-7, 1907.

"INTERNATIONAL SANITARY BUREAU
OF THE AMERICAN REPUBLICS,
"WASHINGTON, D. C., *June* 17, 1907.

"In accordance with a resolution adopted by the Second International Sanitary Convention of the American Republics, it is hereby announced that the Third International Sanitary Convention will be held in the City of Mexico, December 2-7, 1907.

"It is respectfully urged that every Republic of the Western Hemisphere be represented at this Convention both those that have been heretofore represented and those which have not taken part in the previous conventions.

"It will be remembered that the First Convention, held in Washington from the 2d to the 5th of December, 1902, was called in compliance with the 5th of the resolutions relative to Sanitary Police adopted by the Second International Conference of American States in Mexico, January 29, 1902. These resolutions were accepted as the basis for the work of the First Convention, which was of a character chiefly scientific, and resulted in the adoption of certain sanitary and hygienic principles and the establishment of an International Sanitary Bureau at Washington.

"The Second International Sanitary Convention which was held in Washington from the 9th to the 14th of October, 1905, assumed a more formal character than the previous one, and resulted in the subscription to a "Sanitary Convention *ad referendum*," concluded on October 14, 1905, which codified all the measures destined to guard the public health against the invasion and

propagation of yellow fever, plague and cholera. This Sanitary Convention *ad referendum* has been ratified by at least nine republics, and attention is respectfully invited to the following paragraph contained therein:

"'The governments which may not have signed the present Convention are to be admitted to adherence thereto upon demand; notice of this adherence to be given through diplomatic channels to the Government of the United States of America, and by the latter to the other signatory governments.'

"As will be seen below, the Conference at Rio de Janeiro in August, 1906, recommended the adoption of the same Convention by all the countries therein represented.

"Resolutions adopted at Rio de Janeiro, August, 1906.

"Following are the resolutions of the Third International Conference of American States at Rio de Janeiro in August, 1906, indicating, among other measures, matters for consideration by the Sanitary Convention to be held in Mexico City.

The Third American International Conference recognizes the desirability of the Principles of International Sanitary Police which inspired the last Conference held in Rio de Janeiro, as applicable to a specific region, and the convention which was signed in Washington on the 14th of October, 1905, which is applicable to all sections of America, and therefore makes the following recommendations to the countries here represented:

"1. That as a general rule, they should adopt said International Convention of Washington, adhering to the same and putting its precepts into practice.

"2. The adoption of measures intended to obtain the sanitation of the cities and especially of the ports, as well as to obtain, as far as possible, a better knowledge and a better observance of hygienic and sanitary principles.

"3. The desirability of having all American countries represented in the coming International Sanitary Conference which is to be held in the City of Mexico in December, 1907, and that the respective delegates to that Conference should be instructed to study and resolve the following points:

"(*a*) Practical means for giving effect to the Second of the present recommendations.

"(*b*) The establishment and regulation in each of the American countries of a commission composed of three public medical or sanitary officers, in order that, under the direction of the International Sanitary Office, established in Washington, they may constitute an International Bureau of Sanitary Information throughout the American Republics, with power to collect and communicate all data relating to public health and such others as the Conference may consider desirable.

"(*c*) The establishment and organization in the place in South America which the Conference may designate, of a Bureau of Sanitary Information which will furnish to the International Sanitary Bureau, already existing, the necessary data to comply with recommendations V. VI and VII, relative to sanitary police, which were adopted by the Second American International Conference.

"(*d*) The establishment of relations between the International Sanitary Bureau, now existing in Washington, and the 'Bureau Sanitaire International,' of Paris, in order to obtain the best information on sanitary subjects and to reach agreements that will facilitate the objects with which both offices are established.

"4. In accordance with the provisions of paragraph c, article 3, the City of Montevideo is designated as the residence of the Bureau of Sanitary Information."

"Provisional Program for the International Sanitary Convention in Mexico City, December 2-7, 1907.

"The following program has been arranged to embody the sanitary principles considered by the previous conventions and in conformity with the resolutions adopted by the Conference at Rio de Janeiro:

"1st. Each delegate will bring a paper relating to the nation he represents. This paper will cover the following points:

"(*a*) A report on the existence of transmissible diseases which may prevail in its territory, especially with reference to bubonic plague, yellow fever, cholera.

DELEGATES TO THE THIRD INTERNATIONAL SANITARY CONVENTION HELD IN MEXICO CITY IN DECEMBER, 1907.

1. Dr. H. L. E. Johnson, United States
2. Dr. Juan Guiteras, Cuba
3. Dr. Ernesto Soza, Chile
4. Dr. Walter Wyman, United States
5. Dr. Eduardo Licéaga, Mexico
   President of the Convention
6. Dr. Juan J. Ulloa, Costa Rica
   Permanent Secretary
7. Lic. José Algara, Mexico
8. Dr. Ricardo Gutierrez Lee, Colombia
9. Dr. G. Mendizábál, Nicaragua
10. Dr. E. Fernandez Espiro, Uruguay
11. Dr. O. Gonçalves Cruz, Brazil
12. Dr. R. H. von Ezdorf, United States
13. Dr. Rhett Goode, United States
14. Engineer José Elguero, Mexico
15. Dr. Hugo Roberts, Cuba.
16. Dr. P. J. Straub, United States
17. Dr. Pedro Lautaro Ferrer, Chile
18. Dr. J. Gatewood, United States
19. Dr. Salvador Ortega, Guatemala
20. Dr. José Azurdia, Guatemala
21. Dr. R. D. González, Salvador
22. Dr. Francisco J. Yánes, International
    Bureau of American Republics
23. Dr. J. A. Estevez, Ecuador
24. Dr. Genaro Payán, Colombia
25. Dr. L. Lazo Arriaga, Honduras

malaria, beri-beri and trachoma. This report will give detailed information on the measures which have been adopted for the prevention of stamping out of any of the diseases above mentioned, if they are unfortunately present in the country represented by the delegate.

(*b*) A report on the condition of the ports of his country, specifying the works which may have been executed therein, those in course of construction and those which are projected, as well as the manner in which the problem of water supply, of proper sewerage and of the connection of house drains with that system of sewers has been resolved, as well as the methods that have been employed or are proposed for the sanitation of the dwellings.

(*c*) A return of the assistance which the general governments may have furnished to the respective states or municipalities, for the execution of sanitation works in the cities and ports.

"(*d*) A report on all the sanitary police laws which have been issued since the 14th of October, 1905.

"2d. Every delegate will suggest some practical means to prevent persons who may be suffering from tuberculosis from transmitting the disease to the healthy persons who may be traveling in their company, either in trains or in vessels.

"3d. As forming part of the order of the day, the delegates will be at liberty to present original papers relating to the following points:

"(*a*) Studies directed to the discovery of the germ of yellow fever;

"(*b*) Studies directed to the investigation as to whether there are other means of transmission of yellow fever and malaria besides the sting of the mosquitoes, and

"(*c*) Studies directed to the perfection of the methods of combating the mosquito.

"4th. Each delegate will present a report upon the organization in his own country of the commission of three medical or sanitary officers intended to form part of the International Sanitary Commission of Information of the American Republics, as provided for in paragraph 3 (*b*) of the Resolutions adopted at Rio de Janeiro.

"5th. Report upon the establishment of the Sanitary Information Bureau of Montevideo as provided in paragraph 3 (*c*) and paragraph 4 of the Resolutions adopted at Rio de Janeiro.

"6th. Report upon the establishment of relations between the International Sanitary Bureau at Washington and the Bureau Sanitaire International of Paris, as provided in paragraph 3 (*d*) of the Resolutions adopted at Rio de Janeiro.

"7th. Besides the full papers and reports above mentioned, each delegate will bring an extract of the same, but so concise that it can be read in fifteen minutes. These extracts alone will be read during the meetings.

"8th. All the extracts will be written in Spanish and English. Those presented by the delegates from Brazil will be in Portuguese and English, and those by the delegates from Haiti will be in French and English, so that while each delegate reads his extract in his own language, the others can follow reading the same document in the language with which they are familiar.

"By direction of the International Sanitary Bureau of the American Republics.

"WALTER WYMAN,
"Chairman."

As requested in the letter of June 18, 1907, addressed by Dr. Wyman, the Chairman of the International Sanitary Bureau, to Mr. John Barrett, Director of the Bureau of American Republics, Mr. Barrett addressed to the diplomatic representatives of each of the States composing the International Union of the American Republics a communication in which he says:

"I have the honor to enclose copies, respectively, of a letter addressed to me as Director of the International Bureau of the American Republics by Dr. Walter Wyman, Chairman of the International Sanitary Bureau, and of a call, signed by Dr. Wyman, for the Third International Sanitary Convention of the American Republics, to be held in the City of Mexico, December 2-7, 1907, and to request that you will be good enough to forward this call to your Government, and make such recommendations as you deem fit for its worthy representation at this Convention.

"I may add, as a result of a conference with Chairman Wyman, that every effort is being made by the Mexican Government to ensure the success of this gathering, and it is hoped, in view of the importance of the work before it, that each American Republic may decide to appoint delegates."

Program of the
Third International Sanitary Convention of American Republics.

MEXICO CITY, DECEMBER 2 TO 7, 1907.

MONDAY, THE 2D

MORNING.

10 o'clock. Inaugural Session in the special hall of the Department of the Treasury (National Palace).
Speech by the Vice-President of the Republic and Secretary of the Interior.
Speech by the President of the Convention.
Reply by one of the delegates in the name of all the Republics that accepted the invitation, or brief reply by each delegate.
Appointment of committees.

AFTERNOON.

From 3 to 6. Session in the special hall of the Department of the Treasury.
Reading of the reports presented by each delegate in the name of his country and in regard to the different subjects referred to the Provisional Program of the Convention.
The reading shall be made by roll call of the Republics.

NIGHT.

8 o'clock. Banquet given in honor of the Delegates to the Convention by the Supreme Council of the Federal District Government and the Municipality of Mexico, Municipal Palace.

TUESDAY, THE 3D.

MORNING.

8 o'clock. Visit to the Penitentiary of Mexico. The train that will take the party to the Penitentiary will start from the Plaza de la Constitucion (opposite the National Palace) at 8.00 a. m.
From 10 to 12. Session in the special hall of the Department of the Treasury.
Continuation of the reading of the reports.
12 o'clock. Visit to the Post Office building.

AFTERNOON.

3.30 o'clock. The President of the Republic will receive the Delegates at the National Palace.
After the reception a visit will be made to the Palace of Chapultepec.

WEDNESDAY, THE 4TH.

MORNING.

From 9 to 12. Session in the place indicated.
Discussion of the measures of international sanitary police against yellow fever proposed in the reports or on motion of the Delegates.

AFTERNOON.

From 3 to 4. Session in the place indicated.
Discussion on malaria, on the subject of the same reports or motions.
4 o'clock. Visit to the Supreme Board of Health and the Disinfection plants.
From 5 to 6.30. Session in the place indicated.
Discussion on measures of international sanitary police against bubonic plague and cholera proposed in the reports or on motion of the Delegates.

NIGHT.

8 o'clock. Concert in the Arbeu Theatre, in honor of the Delegates.

THURSDAY, THE 5TH.

MORNING.

8.30 o'clock. Excursion to Xochimilco and the Water Works of Mexico City. The trains for this excursion will start from the Plaza de la Constitucion (opposite National Palace) at 8.30 a. m. Visit to the Water Works. In Chapultepec there will be a transfer to the trains that will convey the Delegates to the Water Works.
Lunch at Xochimilco.
Returning there will be a transfer at San Antonio and the electric cars will take the delegates to the National Palace where a session will be held from 6 to 8 p. m.

NIGHT.

From 6 to 8. Session in the place indicated.
Discussion on measures against trachoma, beri-beri and other transmissible diseases.

FRIDAY, THE 6TH.

MORNING.

From 9 to 12. Session in the place indicated.
Discussion on measures for the prevention of tuberculosis on board ships and railroad cars.

AFTERNOON.

3 o'clock. Visit to the Juarez, Roma and La Condesa colonies of Mexico City.
Visit to the General Hospital, the Pumping Station, the sewer-cleaning plant, and a national primary school.

NIGHT.

From 7 to 9. Session in the place indicated.
Continuation of the discussion on amendments to the previous convention.
Reading of reports on the discovery of the yellow fever germ; on other means of transmission of yellow fever and malaria, besides the mosquito bite, and on studies tending to improve the methods of exterminating the mosquito.

SATURDAY, THE 7TH.

MORNING.

From 8 to 12. Session in the place indicated.
Discussion of pending subjects.

Adoption of resolution presented in the previous session.
Presentation by each delegate of a report on the organization in his country of a commission composed of three physicians or health officers, to form part of the International Sanitary Information Committee of the American Republics.

AFTERNOON.

From 3 to 5. Closing session in the place indicated.
Designation of the place for the next Conference.
Designation of the authority who will issue the invitations for the next Convention.
Appointment of the President for the next Convention.
Appointment of the President and personnel of the International Sanitary Bureau of the American Republics.
Brief farewell address by each delegate, and reply by the President of the Convention.

NIGHT.

8 o'clock. Dinner given by the Mexican Delegation in honor of the Delegates of the other Republics.

DEATH OF SEÑOR LICENCIADO DON JOSÉ ALGARA.

It is with profound sorrow that we announce the death of Señor Don José Algara, Assistant Secretary of Foreign Relations of Mexico and one of the Delegates of the Mexican Government to the Third International Sanitary Conference of American Republics, which occurred on the 10th of March, ultimo. Señor Algara was one of the most prominent officials of the Mexican Republic, where he held very important positions, filling them with the ability due to his personality, talents and learning.

The repeated acts of kindness and courtesy that he extended to the Members of the Convention, as an official of the Government, as a friend and as a private person, won for him the gratitude and friendship of the delegates, and thus the pain that they feel on account of his untimely death is still deeper.

The undersigned feels that he is faithfully interpreting the sentiments of all the members of the Third International Sanitary Convention of American Republics when he offers collectively, to the Government of Mexico and to the family of Señor Algara, the protests of our sincerest condolence for the irreparable loss they have suffered.

New York, March 15, 1908.

(Signed) JUAN J. ULLOA,
Permanent Secretary.

The Late Mr. José Algara,

Undersecretary of Foreign Relations of the Republic of Mexico, and a Member of the Mexican Delegation to the Third Sanitary Conference of the American Republics, held in Mexico City in December, 1907. He died March 10, 1908.

THIRD INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS.

FIRST DAY—MONDAY, DECEMBER 2.

Morning—Opening Session.

The Convention was called to order at 10 A. M. by Señor Don Ramón Corral, Vice-President of the Republic of Mexico. Eleven Republics were represented at this opening session by the following Delegates: Dr. Oswaldo Goncalvez Cruz, Brazil; Drs. Ernesto Soza and Pedro Lautaro Ferrer, Chile; Drs. Ricardo Gutierrez Lee and Genaro Payan, Colombia; Dr. Juan J. Ulloa, Permanent Secretary of the Convention, Costa Rica; Drs. Juan Guiteras and Hugo Roberts, Cuba; Dr. Juan Horacio Esteves, Ecuador; Drs. Salvador Ortega and Juan Azurdia, Guatemala; Dr. Luis Lazo Arriaga, Honduras; Dr. Eduardo Liceaga, Chairman of the Convention, Senor Licenciado Don Jose Algara, and Engineer Hilario Elguero, Mexico; Dr. Gregorio Mendizabal, Nicaragua; Dr. Rodolfo B. Gonzalez, Salvador, and Drs. Walter Wyman, J. Gatewood, P. J. Straub, H. L. E. Johnson, Rhett Goode, and R. H. von Ezdorf, United States. The Vice-President of the Republic welcomed the Delegates as follows:

"Honorable Delegates:

"The most important of the resolutions adopted by the Second International Conference of American Republics, held in this city in 1901-2, was perhaps the one providing for the meeting of periodical sanitary conventions for the purpose of studying and adopting measures of prevention in the countries of this Hemisphere against the propagation of infectious diseases through littorals and frontiers, and for the encouragement of sanitation in each country. And I consider that resolution of the illustrious Assembly referred to as one of the most transcendental, because, besides the excellence of its purpose, it has the quality of being entirely practical.

"A result of that resolution have been the two Sanitary Conventions held in Washington in December, 1902, and October, 1905, and the one whose opening assembles us here today. Among other positive benefits that have been obtained, the Convention signed on the 14th of October, 1905, in the city of Washington is worthy of special mention. That convention specifies, not only the measures of defense that countries should adopt against infectious diseases appearing in other nations, but also encourages the Governments to enforce all reasonable measures for the purpose of quenching the propagation of epidemics that constitute a real scourge to the people. Based on the Convention of Paris of 1903, adopted by most of the European countries, and by some of America, Asia, and Africa, that of Washington offers all

the guaranties of righteousness, not only because of the knowledge of the authors of that of Paris, but also for the reason that the Delegates to the Washington Conference supplemented it and perfected it in accordance with the last conquest of science. Of the eleven Republics that signed it, seven have ratified it, and two of the Central American countries that were represented thereto have adhered to it. These countries are beginning to enjoy the benefits derived from the enforcement of a sanitary legislation wisely codified, and which is profoundly scientifical, for the protection against certain infectious diseases by means of uniform and reasonable measures which enable them to do away with all customs that, based on the fear of the outbreak of an epidemic, caused considerable damages.

"As in everything that tends to eradicate deep-rooted prejudices and errors that have been transmitted from generation to generation, the new sanitary systems, in spite of being founded upon the serious and profound study of men and things, encounter with difficulties before becoming general, and such result is not accomplished but with the slowness that is necessary to overcome the obstacles that old ideas offer; but at last they are beginning to be universal, as all that has truth for basis. For that reason it is to be hoped that this Honorable assembly, composed of learned men from nearly all the countries of the continent, and which throws new light on the work that has been accomplished, will take one more step towards the end sought, rectify errors, from which no human work is free, widen, if possible, the conquests that have been gained, and succeed in obtaining the adherence of not only the nations represented in this Convention and that of 1905, but of all the countries of America, in order to make uniform upon scientific basis the sanitary measures which have for object the protection of human life.

"If in all the activities of life countries and men evolve continuously, seeking always their welfare, and if the principal aim of progress is to render human existence more comfortable, worthier, and more prolonged, it is obvious that the questions relating to public health are very important and must occupy a prominent place in the policy of every Government, inasmuch as nothing tends more to the accomplishment of those ends than the measures of public hygiene, a proof of civilization and of the improvement of mankind.

"These facts are so elementary that they are within the reach of all persons that have some education, however incipient. The more educated the citizens of a nation are, the greater is their persistence in requiring from the public administration the enforcement of sanitary measures of a general character, and the Governments, as civilization becomes more and more diffused, pays more and more attention to this science, propagating its principles by means of the schools, in what regards private hygiene, and carrying out costly improvements and establishing proper institutions to meet the requirements of public health. For that reason, we see, that conventions meet in the more advanced cities of Europe and America for the purpose of encouraging interest in the science of hygiene, propagating its principles, and applying the latter in a practical way to the life of countries; also for the same reason, new sanitation works are projected or carried out, and new discoveries and applications are made in the war against disease.

"Our country complies with its obligations so far as it can. Besides having completed the gigantic and lasting drainage of the Valley of Mexico which consumed the resources and energies of many generations, it has accomplished the sanitation of Mexico City as has been or is being done in the principal ports, Veracruz and Tampico on the Gulf of Mexico, Puerto Mexico and Salina Cruz, the termini of the Interoceanic Tehuantepec railroad, Mazatlan and Manzanillo on the Pacific, and those of the most important cities, Puebla, Guadalajara, Chihuahua, Monterrey, Saltillo, Torreon, Durango, Guanajuato, Leon, Celaya, San Luis Potosi, Queretaro, Toluca, Cordoba, Tacubaya and Guadalupe Hidalgo, without mentioning towns of lesser importance. There are also many cities which study and effect their sanitation.

"For the realization of many of these works the federal government has co-operated by expending vast sums of money, thus complying with the recommendation of the second international conference of America and the states and municipalities have expended and are expending many millions of dollars in these improvements.

"For many years Mexico has had a Superior Board of Health which has worked a positive interest in and great development of sanitary services, creating at its ports and frontiers delegations having in charge an international sanitary police, establishing prophylactic systems of vigilance and disinfection and fighting successfully epidemics which have appeared in the country. In this connection it is worthy of note the campaign which has been waged by this body against the yellow fever scourge which for centuries has sown death along the coast of the Gulf of Mexico, a campaign in which it will soon achieve a splendid victory.

"I speak of these conquests in such transcendental matters in my country, gentlemen, not only as a just motive for national satisfaction but also because your program comprises topics on the advancement and development in the public health service within your countries and to give you a pledge that the Mexican Republic, comprehending the high ends which attend this work, will comply with loyalty and with determination the obligations which it contracts with the other countries in the realization of the proposals which come within your province.

"The program of your labors inspires the liveliest interest. You will inform each other mutually of the labors which each of the nations of America has accomplished or is preparing to accomplish in the interest of public health; you will communicate the results of your studies on a matter of such high importance as the transmission of tuberculosis, as the investigation of the fever germ and the means of the transmission of this peril across the American seas, and of malaria, and you will in the name of your governments, agree on means to harmonize the action of American Republics in the matter of sanitary police, fix a more solid basis for mutual knowledge fortunately now existing, between the peoples of the Western Hemisphere and to prepare for the future unions at which you will congregate.

"I can entertain no doubt of your success. That is guaranteed by your wisdom and by your good will.

"Honorable Delegates:—In the name of the President of the Republic I welcome you to Mexico, which receives you with affection and

friendship. May your stay in it be as agreeable as it is to us to offer you our hospitality."

Then Dr. Liceaga, President of the Convention, delivered the following speech:

Mr. Vice-President; Mr. Minister; Honorable Delegates:

The Mexican Republic feels gratified at the fact that her capital has been chosen as the seat for the Third International Sanitary Convention of American Republics; this capital, where six years ago the Second Conference of the same Republics met, which adopted the first resolutions on International Sanitary Policy. It is a pleasure for our country to see that those resolutions have been accepted, not only by the representatives of the Republics that signed them, but also by the nations themselves, because most of them have sent delegates to the two Sanitary Conventions that met in Washington and the one that is now inaugurated, in accordance with Section V of said Resolutions of January 29, 1902.

It pleases me to remind you that the first Convention resembled a congress of hygienists, that had, however, the merit of determining the questions from a technical point of view; of taking its oath of faith before the scientific world, and of showing in a practical way the interest that the American Republics take in matters of hygiene, which have been neglected for a long time, as if health were not the most precious gift of mankind. The second Convention arrived at the practical solution that was possible to reach within the very short period of six days—that of making an agreement for the protection against three of the diseases that most cruelly flagellate humanity, to-wit: Bubonic plague, cholera, and yellow fever. That agreement has been a decided progress, because it unites under the same international law Republics of this Continent that live in continuous and necessary communication.

The work of this Convention must be, first, to secure the adherence of the Republics that have not yet given full consent to the Convention of Washington of 1905. The securing of the unanimous vote of the Western Hemisphere in behalf of the Convention of Washington, should not be considered as a puerile vanity—not because it is a perfect work, as such perfection can only be accomplished with time—but on account of the benefits that all the Nations of this Hemisphere will obtain from the regulation of their sanitary matters under one common sanitary law. Although the civilized world accepts now the principles conquered by hygiene, if these principles are not expressed in the same manner in the legislation of each country that is going to form this Convention, the construction given to each principle will necessarily give origin to confusion of ideas and improper application of the accepted rules.

It has always been said that if the peoples of the world spoke the same language, used the same system of weights and measures, and had a common legislation in all matters, they would understand each other better and further their interests in an easier way. Now then, as the accomplishment of that end is not possible, let us seek that uniformity and harmony, at least in the legislation regarding interna-

tional sanitary policy. The Convention that we signed at Washington in 1905 establishes a community of purposes, not only among the nine Republics that have accepted it so far, but also among the sixteen European nations, besides Persia and Egypt, that signed the International Convention of Paris of 1903, as this latter one and that of Washington are almost identical. This means that twenty-seven countries of Europe, America, Asia, and Africa, regulate at present their maritime or land communications in accordance with a uniform law of international sanitary policy.

If we could extend this benefit to the other twelve nations of America which have not yet accepted that Convention, we would show that even though civilized countries may be separated by other interests, they are united, at least, in matters concerning the preservation of health and the prolongation of life.

Our first resolution should be, therefore, to secure the unanimous consent of the Republics of the Western Hemisphere to accept the Convention of Washington.

If we reach that unanimous agreement, it would be necessary to fix the time during which that Convention should bind the nations signing it; it would not be wise to make that period too long, because scientific progress and experience in the faithful execution of the laws in force would show its deficiencies or require the adoption of new scientific discoveries, and in some way or other the Convention should be modified from time to time.

But even if the Convention of Washington were unanimously adopted by the American Nations, it would only protect us against bubonic plague, cholera, and yellow fever.

It is true, Honorable Delegates, that these three diseases have ravaged entire regions and ruined commerce, bringing death and desolation to inhabitants of the invaded countries; but there are other evils that, without causing as much panic, produce greater damage. There is, for instance, tuberculosis, which has settled itself in all civilized countries, and upon which the valuable attention of hygienists should be concentrated, as well as that of those here assembled, in order to point out what measures should be adopted for the prevention of this dreadful foe of mankind. The fight against tuberculosis has been undertaken everywhere from different points of view; we should study the disease from this standpoint: Its transmission in those vehicles which now make communication so easy and rapid, to-wit: The ships and the railroads. This important question deserves your greatest attention, and I have reasons to hope that you will give it due consideration in the name of the dearest interests of humanity.

There are other diseases the remedies for which are not unknown, but which do not cause the beneficial alarm produced by the others that we have just mentioned; for instance, malaria (which prevails in so many regions, specially in those of the littorals of both oceans, situated between the Tropics of Cancer and Capricorn), not only causes the death of many persons and in terrifying numbers, but also undermines slowly the constitution of others, impoverishes their blood, weakening it gradually, and, therefore, renders them invalid for work, shortens extraordinarily the duration of their lives, and is a powerful factor in the degeneration of the human race. The means to protect ourselves

against this disease are, as I have said, known to us, but no effort has been done to propagate them. Upon you, Honorable Delegates, depends the divulgation of the knowledge of the weapons that science has placed at our disposal, enforcing preventive measures among the working classes, in the small towns, and in the cities where the *anopheles* mosquito prevails, undermining the most robust constitutions.

Another disease of slow development, which had been confined, so to say, to the Oriental countries, and which, according to statistics, causes the suffering of thirty million persons on the surface of the earth, tends to propagate itself rapidly by means of the extreme facility which the steam provides to communication by land or sea; I refer to trachoma, heretofore unknown or, rather, known only to oculists, a disease which is now invading our countries through the enormous currents of immigration from the Asiatic states, and which threatens to become as generalized an evil as the ones mentioned before. It is indispensable that the Governments should see to it that the introduction of a disease that is almost unknown in their countries be prevented. It is your duty, gentlemen, to prescribe the precise rules which should serve as a guide to legislators, so that the sanitary codes of all nations may contain definite provisions preventing the propagation of so dreadful a scourge of humanity.

It is strange that until the present moment legislators have only paid attention to the transmission of acute diseases, those of rapid incubation, which men can carry from one town into another, and to which, it may be said, international sanitary policy has been confined so far.

It is, therefore, indispensable that international sanitary policy be provided with laws preventing the introduction into countries where they had been unknown until the present, of such chronic diseases as trachoma, beri-beri, and other similar ones.

Honorable Delegates: For many centuries the peoples of the earth have paid attention only to their defense against exotic diseases, without taking into consideration that it would be much more sensible and logical to prevent any disease from originating in their respective country, for without such origin no disease could be exported. During the last sixty years, England has been teaching us the lesson that an exotic disease, whatever it be, can not take or develop in healthy cities; cities provided with a water supply that is sufficient in proportion to their population; where the inevitable human and animal refuse is transported from the interior of dwellings to the outskirts of the town, in which it can not be noxious to health but, instead, contribute to fertilization of the soil; cities the streets and squares of which are closely and impermeably paved and frequently sprinkled and swept, thus avoiding the dust that propagates the different and multiple diseases; cities whose dwellings receive the amount of light and air that is indispensable to life, thus avoiding human conglomeration; such cities will never be invaded by transmissible diseases. We should imitate the example that England gives us constantly, not only for the purpose of preventing the exportation of diseases to other countries, but also in order to protect ourselves against them.

The best proof that we can give of the desirability of improving our

methods is found in what is now taking place as regards yellow fever in the Mexican Republic. The legendary and fatal focus of the disease which during four centuries has existed on our gulf coast, made us the terror of our neighbors and even of distant nations. We undertook a campaign against yellow fever and within the very short period of three months we extinguished the epidemic that like a trail of gunpowder extended over the States of Tamaulipas, San Luis Potosi, Nuevo Leon and Coahuila, as far as our northern frontier on the one side, and on the other to the northern shores of the peninsula of Yucatan. That epidemic having been extinguished, we decided to suppress the isolated foci that had remained scattered throughout the states of Tamaulipas, Veracruz and Yucatan, where this terrible scourge always prevailed. In order to make this fight effective, we established sanitary brigades in Merida, Progreso, Veracruz, Tampico, Coatzacoalcos, Santa Lucrecia, Tehuantepec, Salina Cruz, Cordoba and Tierra Blanca, and, after a vigorous campaign tenaciously carried out, not only during the period when the dreaded disease reappears, but also throughout all seasons of the year, we were enabled to suppress all the foci of the epidemic and deal with isolated cases, so that during the eleven months which have elapsed of the present year, after an incessant struggle that has been sustained for four years, we have only observed five cases of yellow fever, and these were isolated cases in places distant from each other. As we continue fighting the disease with the same energy as if a real epidemic existed, we have well founded hopes that the fearful scourge of yellow fever will disappear from our territory, never to return.

When we have obtained this desirable end, will our neighbors or other nations still continue to fear us; and will they place restrictions on our trade and free communication?

Another example: Bubonic plague makes its appearance on the Pacific coast of this Republic. Our neighbors of the north and south, as well as in the West Indian Islands, all consider themselves threatened because they fear that our government has not the necessary resources with which to prevent the spread of that terrible disease. But within a space of six months we see the disappearance of the last vestige of the plague, and our neighbors recovered their ease of mind while we acquired a fuller confidence in our own resources.

Gentlemen: I have mentioned these examples in order to demonstrate how great is the obligation under which we all stand to attend to the sanitation of our cities, and not only to the great centers of population, but also to the smaller ones, and even to the villages.

Great or small nations are formed with the same units; if we fail to improve the sanitation of the small town, that town might become a focus from which the disease might spread itself throughout the entire country. We should always begin with these small units; we should bring to the attention of our respective Governments the idea of favoring sanitary measures everywhere. If small towns can not undertake their sanitation, they will request the help of the states to which they belong; if the assistance requested can not be rendered by the states, these will call upon the central governments for such help, and these latter ones should, in turn, consider that the sanitation of towns is less

expensive and causes less detriment to the welfare of the people than the combatting of epidemics.

Honorable Delegates: In the secular evolution of humanity, civilization has extended from the Orient to the Occident. We who inhabit the Western Hemisphere should now avail ourselves of the very rich legacy left by Europe, but it is not sufficient that we take and preserve it; we should, besides, improve it with the wealth of our own inspiration. It is indispensable that these new countries should abandon the principle that guided our predecessors in their legislation of international sanitary policy; they laid down the principle that the first point was to look to their defense even though such defense might injure the interests of those from whom they defended themselves. This practice has been followed up to our times; it is nothing to us if the trade and wealth of a nation suffers if through such suffering we obtain an advantage. Let us try to obtain a healthier and more liberal view of matters, and not defend our legitimate interests by wounding those of others; let us be more practical and more humane; let us not look upon our unfortunate brethren as enemies, whatever may be their title or nationality, through the mere fact that they are sick; let us not fight against our fellow man or injure his interest, but let us rather treat him as a brother, isolating him so that he may not hurt us, but allowing his goods to have free transportation. Let all the nations of America unite in one league against disease, and for the old rule let us substitute this:

"To defend our legitimate interests without injury or doing the least possible injury to others."

I must express the hope that this principle, more Christian and more humane, will govern the deliberations which this conference is about to commence. Let us not forget, gentlemen, that we are going to labor together for the preservation of the health of all, for the prolongation of individual life, and for the increased vigor and perfection of the human species. (Applause.)

I bid you welcome. (Applause.)

THE CHAIRMAN. The Delegate from Brasil has the floor.

THE DELEGATE FROM BRASIL. Mr. Vice-President of the Republic and Secretary of the Interior; Mr. Chairman and Members of the Convention: The Government of Brasil has intrusted me with the mission of conveying its most cordial regards to the Mexican Government, our noble host; the same regards I extend to the Sanitary Conference here assembled, with my Government's sincere wishes for the complete success of the work today inaugurated. The Brazilian Government wishes me to express also the great interest which it takes in all sanitary matters, because it considers public health as the basis for the progress of nations. For that reason, it has always a great desire to contribute and co-operate in all undertakings tending to the advancement of international hygiene, either sending its representatives to Sanitary Congresses, or considering as a great distinction and honor the selection of its territory as the seat of such useful assemblies. (Applause.)

THE CHAIRMAN. The Delegate from Colombia has the floor.

THE DELEGATE FROM COLOMBIA. Mr. Vice-President of the Republic, Mr. Chairman of the Convention, Messrs. Delegates: For the first

time the Republic of Colombia participates in these Conferences; circumstances, the mentioning of which is not pertinent, prevented our Nation from sending representatives to the two previous and very interesting Conventions; thanks to the favorable conditions now prevailing in Colombia, and to the good administration that manages the national affairs, our Government has been able to honor my co-delegate and myself with its representation so that we may, in its name, accept all agreements that in accordance with truth may be adopted by the Convention, and to avail ourselves of these favorable circumstances so that our progress and commerce may follow the path of those of other nations.

With great pleasure, enthusiasm and admiration we see in the report presented by the Chairman of the Convention, Dr. Liceaga, examples so palpable and recent that we are imbued with a desire to do our duty. In accepting the welcome, my Government, not only has given us the power to express our gratitude for the kind hospitality extended to us, but also to accept with pleasure all scientific measures that may be adopted by this Convention. (Applause.)

THE CHAIRMAN. The Delegate from Costa Rica has the floor.

THE DELEGATE FROM COSTA RICA. Mr. Vice-President of the Republic; Mr. Chairman of the Convention; Messrs. Delegates: In the name of the Government and the people of my country, whom I have the honor to represent in this most important Convention, I have the pleasure of extending my most cordial greetings to the Mexican Government and people. The success that will be attained by this campaign, so nobly and vigorously undertaken by wisdom and experience against the great foes of the Continent, will be a new leaf added to the crown of unfading glory that encircles the lofty head of the noble Mexican Nation. (Applause.)

THE CHAIRMAN. The Delegate from Cuba has the floor.

THE DELEGATE FROM CUBA. Mr. Vice-President of the Republic; Mr. Chairman of the Convention; Messrs. Delegates: In the name of Cuba we greet the Mexican Nation, and the Delegates of the Republics of the Continent, and we express our gratitude for the cordial welcome. (Applause.)

THE CHAIRMAN. The Delegate from Chile has the floor.

THE DELEGATE FROM CHILE. Mr. Vice-President of the Republic; Mr. Chairman of the Convention; Messrs. Delegates: We have the honor to introduce ourselves to the Third Pan-American Sanitary Convention as the Delegates from Chile, my distinguished colleague, Doctor Pedro Lautaro Ferrer, and myself.

The Republic of Chile hastened to send us, always wishing to fulfill the promise made to take part in all scientific tournaments, and very specially when they have such a remarkable significance of confraternity and international mutual co-operation as the present one.

Upon entering in this Convention, our first manifestation is to address a cordial greeting to the high personality of the Chief of the Great Mexican Nation, His Excellency General Porfirio Diaz, world-renowned statesman, who knows how to execute his high duties with a delicate attention to scientists.

We do not doubt for a moment that this Convention will be successful, and we hope that the City of Mexico will have the honor of seeing

realized the first practical measures, fruit of the first two Sanitary Conferences.

I will close, gentlemen, sending our very cordial greetings to all the American Republics through the illustrious Delegates that honor this Convention, and offering them the share of our good will to help them with enthusiasm in the realization of the great international work which we inaugurate today. (Applause.)

THE CHAIRMAN. The Delegate from Ecuador has the floor.

THE DELEGATE FROM ECUADOR. This is the first time that my Government sends a representation to the Sanitary Conventions, and it is with pleasure that it now participates in the present one. In the name of my Government, I thank you for your kind welcome. (Applause.)

THE CHAIRMAN. Dr. Wyman, Delegate from the United States, has the floor.

DR. WYMAN declared that it was not necessary to express the pleasure of himself and the other American Delegates at being in Mexico on this occasion.

The American Delegate spoke of the great interest which is inspired by the present Convention and of the many matters of importance which will be transacted therein; of the great benefits which would be derived by association, through this Convention, of the American Republics with the great countries of Europe.

THE CHAIRMAN. The Delegate from Guatemala has the floor.

THE DELEGATE FROM GUATEMALA. Mr. Vice-President of the Republic; Mr. Chairman of the Convention; Messrs. Delegates: The Guatemalan Delegation, through me, has the honor of greeting the illustrious Government of Mexico, the Mexican Delegation, whose most meritorious labors will be crowned with the most gratifying success in this Convention, and the cultured and hospitable Mexican people.

President Manuel Estrada Cabrera, of Guatemala, who has initiated in my country important sanitary works, upon accepting with pleasure the invitation of the International Sanitary Bureau of Washington, and of the Mexican Government, to participate in the present Conference, has considered that its benefits will be manifold not only for this beautiful country but also for each and every nation here represented. The Guatemalan Delegation can not but have the same opinion, and makes the most fervent vows for the happy crowning of the work that is to be undertaken, and for the personal happiness of the illustrious members of the Mexican Government, of the Delegates of this Convention, and of the Mexican people. (Applause.)

THE CHAIRMAN. The Delegate from Honduras has the floor.

THE DELEGATE FROM HONDURAS. Mr. Vice-President of the Republic; Mr. Chairman of the Sanitary Convention; Messrs. Delegates: The Republic of Honduras has accepted the invitation that was extended to it to participate in this Convention; it requested me to greet through the President of the Republic the great nation of the Occident, north of us, which has always attracted our attention on account of her progress. I also wish, gentlemen, to thank you for the attentions that have given us the right to take part in this Convention, and I believe that if all that would result from this Convention were only a knowledge of what Mexico has accomplished in sanitation, we would be satisfied with our work. (Applause.)

THE CHAIRMAN. The Delegate from Nicaragua has the floor.

THE DELEGATE FROM NICARAGUA. Mr. Vice-President of the Republic; Mr. Chairman; Messrs. Delegates: In the name of the Government of Nicaragua, whom I have the high honor to represent in this Sanitary Convention, I bring, in the first place, a message of affection to our great sister Republic, and of congratulation for the extraordinary progress she has achieved in all branches, and specially, as we have just now heard in the speech of the Vice-President of the Republic, in that of hygiene, which so much distinguishes the countries that have reached a high degree of civilization.

I congratulate and greet all my colleagues, all the envoys of the Republics, who understand the high importance of the mission that has been entrusted to them, and who come here animated by the best desire to bring to us their share, as progressive Republics, as a useful contribution to the great work. I congratulate the Mexican Republic which has achieved such a high degree of progress under the wise and patriotic administration of that most learned and prudent man, of universal fame, as the Delegate from the United States has just now said; I congratulate Dr. Liceaga for the splendid manifestation and program which he has brought us here, of the efforts exerted by countries to fight the great plagues that destroy humanity, and that have caused the fighting of such plagues up to their very origin.

To conclude, gentlemen, I make fervent vows that the labors of this Convention, today assembled for the third time, may achieve the ideals that it aims for, and that we may codify, as Dr. Liceaga said, the laws of every country and collectively of all the other nations. (Applause.)

THE CHAIRMAN. The Delegate from Salvador has the floor.

THE DELEGATE FROM SALVADOR. Mr. Vice-President of the Republic; Mr. Chairman of the Convention; Messrs. Delegates: Having been honored by the Supreme Government of Salvador with its representation before the Third International Sanitary Convention, I beg leave, in the first place, to greet, in the name of the Salvadorean Government and People, the Government and People of Mexico in the illustrious personality of its most worthy First Magistrate, the eminent General Porfirio Diaz, originator of the wonderful progress of this great Nation, and to present my kind respects to His Excellency the Vice-President of the Republic; to His Excellency the illustrious veteran of diplomacy, Senor Don Ignacio Mariscal, today indisposed by an illness from which we hope he will soon recover; to the Chairman of this Convention, the learned Dr. Liceaga, a physician of universal reputation, to whom public health owes so much, and who has spent the greater part of his life and of his inextinguishable energies in the carrying out of so many sanitary works, such as the sanitation of this beautiful capital, the pride of Mexico; and finally, to each of the Honorable Delegates of the various Nations here assembled.

Having fulfilled this duty of courtesy, so pleasantly gratifying for me, I only have to solemnly assure you that the Government which I represent will do all that is within its power to carry out the wise resolutions that may be adopted, and that it will faithfully fulfill all the obligations that it may contract in this Convention. (Applause.)

THE VICE-PRESIDENT OF THE REPUBLIC. Today, the second of De-

cember, nineteen hundred and seven, the Third International Sanitary Convention of American Republics is solemnly inaugurated in the City of Mexico. (Applause.)

THE CHAIRMAN. I move that the representatives of the Nations that have accepted the invitation extended to them, be made Vice-Presidents of the Convention. I have taken the liberty, and I hope you will excuse me for it, to appoint Dr. Walter Wyman as Vice-President; he has been the President of the previous Conventions, and I thought that this fact places him in exceptional conditions. I hope my action will meet with your approval. (Applause.)

I beg to submit the following names, by order of nations, for Vice-Presidents:

Doctor Walter Wyman, United States.
Doctor Oswaldo Goncalvez Cruz, Brazil.
Doctor Ricardo Gutierrez Lee, Colombia.
Doctor Juan J. Ulloa, Costa Rica.
Doctor Juan Guiteras, Cuba.
Doctor E. Soza, Chile.
Doctor J. H. Estevez, Ecuador.
Doctor Salvador Ortega, Guatemala.
Doctor Luis Lazo Arriaga, Honduras.
Doctor Gregorio Mendizabal, Nicaragua.
Doctor Rodolfo B. Gonzalez, Salvador.

I wish to know if the appointment of Vice-Presidents in the persons I have mentioned meets with your approval. (Applause.)

Motion approved.

For the purpose of studying the different subjects to be taken up before the Convention, the Chairman appointed the following committees:

Committee on Credentials.—Lic. José D. Algara, Dr. Rhett Goode and Dr. S. Ortega.

Committee on Council.—Drs. Eduardo Liceaga, Walter Wyman, Juan Ulloa, E. Laza, L. Gutierrez Lee.

Committee on Yellow Fever.—Drs. Juan Guiteras, R. H. von Ezdorf, O. Gonzalez Cruz and W. G. Owen.

Committee on Bubonic Plague.—Drs. P. L. Ferrer, E. Liceaga and P. F. Straub.

Committee on Trachoma, Beri-beri and Cerebro-Spinal Meningitis.—Drs. James Gatewood, G. Mendizabal and H. Roberts.

Committee on Tuberculosis.—Drs. H. L. E. Johnson, J. Azurdia, L. Lazo Arriaga, G. Payan, R. B. Gonzalez and J. H. Esteva.

THE CHAIRMAN. The appointment of these Committees is submitted to the approval of the Convention.

Approved.

THE CHAIRMAN. In order that we may devote the very brief space of time during which we will be assembled, and to avoid interpellations as well as the calling to order any delegate for following strictly the parliamentary rules, I request the Members of the Convention to accept as rules those that appear in the programme distributed among all the Governments; as to the subjects that will be considered, it is established as a rule that the detailed reports presented by the different Delegates will be read before the Convention in the form of a resumé,

the perusal of which shall not exceed fifteen minutes, but their publication will be in full. I request the Delegates that they observe the following rules, purely conventional, in case they are accepted:

In order that the time of the convention may be not taken up with other than technical matters the Delegates are requested to kindly submit, during the programs of the meeting, to the following rules:

1.—The Delegates will be called from the list in the alphabetical order of the countries which they represent.

2.—Conforming to article 7 of the temporary program the Delegates will present an extract of their reports or treatise, but the reading will occupy not to exceed fifteen minutes.

3.—During discussions the speakers will be allowed the floor but five minutes.

4.—All Delegates who have the floor and who desire their speeches placed on the record will submit them in writing to the Secretary at the same session during which it is delivered.

5.—No delegate will be permitted to speak more than twice on the same subject, except the person making the motion, who is supposed to reply to all objections thereto.

6. Every resolution or motion on any subject submitted to this Congress should be referred to the Advisory Committee, which will study the subjects and decide whether or not they should be submitted to the consideration of the Congress.

Shall it be approved? It was approved.

Gentlemen: I beg to remind you that our regular session will be held at 3 o'clock in this same place, and that tonight at 8 o'clock the Superior Council of the Federal and Municipal Governments will give a banquet in your honor at the Municipal Palace.

The session adjourned.

Afternoon Session.

The afternoon session was called to order at 3 o'clock.

The report of the Committee on Credentials was approved without discussion, and reads as follows:

"The undersigned, members of the Committee on Credentials of the Third International American Sanitary Convention, having examined the credentials submitted to them, as well as the diplomatic notes on file in the Department of Foreign Relations on Mexico, relating to the appointment of delegates to said Convention, recommend that the credentials of the persons stated below be approved:

Brazil: Doctor Oswaldo Gonçalvez Cruz.

Colombia: Doctors Ricardo Gutiérrez Lee, and Ricardo Payán.

Costa Rica: Doctor Juan José Ulloa.

Cuba: Doctors Hugo Roberts, and Juan Guiteras.

Chile: Doctors Ernesto Sosa, and Pedro Lautaro Ferrer.

Ecuador: Doctor Juan Horacio Esteves.

United States: Doctors Walter Wyman, R. H. von Ezdorf, P. T. Straub, James Gatewood, Charles Harrington, W. G. Owen, Rhett Goode, and H. L. E. Johnson.

Guatemala: Doctors Salvador Ortega, and J. Azurdia.

Honduras: Dr. Luis Lazo Arriaga.
Mexico: Doctor Eduardo Licéaga, Dr. José Algara, Engineer Hilario Elguero.
Nicaragua: Doctor Gregorio Mendizábal.
Salvador: Doctor Rodolfo B. González.
Uruguay: Doctor Ernesto Fernández Espiro.
Mexico, December 2, 1907.—José Algara, Rhett Goode, Salvador Ortega."

Dr. Johnson, Delegate of the United States, moved that the Consul-General of the United States in Mexico, Dr. W. M. Brumby, Dr. John Frick, and Dr. J. H. Stolpen, be allowed to attend the sessions. This motion was approved.

The Chairman: Let us commence our scientific work. The delegate of Brazil has the floor, and will read the extract of the paper he submits to the Convention in accordance with the rules and regulations approved by this Convention.

The delegate from Brazil read the extract which appears in the appendix, page 137.

Doctors Gutiérrez Lee, Ulloa, Roberts, Ferrer, Wyman, Lazo Arriaga, and Licéaga, delegates of Colombia, Costa Rica, Cuba, Chile, Honduras, United States, and Mexico, respectively, then read extracts of their essays.

The reports which do not appear below will be found in full in the appendices.

Doctors Azurdia, of Guatemala, and González, of Salvador, requested to be allowed to read their reports at tomorrow's session, and the delegate of Nicaragua said that he would submit his report as soon as he received the data which he had asked the Government he represents to furnish him.

Dr. Julian J. Ulloa, delegate of Costa Rica, read a summary of the report referred to in the provisional program of the Convention. (See Appendix, page 160.

The delegate of Honduras read an extract from the report he will submit in accordance with the program of the Convention. (See Appendix, page 173.

The Chairman. It would not be possible for me to make extracts from the report presented by the Mexican delegation, and for this reason, I shall only make brief remarks in connection with each one of them, in the short time at my disposal.

Yellow Fever.

Regarding yellow fever, I shall limit my remarks to a very few words.

The campaign which has been waged during four years, and as I said in the address I had the honor to read to this Convention, enabled us to destroy this epidemic in three months on the entire Gulf coast, and even the epidemic which extended to the interior of the country we controlled easily and completely, there remaining latent only the old foci of Veracruz and northern Yucatan. The disease has also appeared periodically in Tampico, and the intervals of these outbreaks sometimes have been as long as 20 years, to such an extent that persons

who were considered immune became again subject to the disease, but since November 3, 1903, there has not occurred a single case.

As I stated in the report I read this morning, no more than five cases of yellow fever have developed this year, distributed as follows:

Two cases occurred on February 7th in a small village called Paraje Nuevo, in the Canton of Cordoba, State of Veracruz, one of which was discovered immediately, and the other patient went to Veracruz, where he was isolated, and died on the 9th of the same month. The patient of Paraje Nuevo was entirely isolated as soon as it was discovered that he had yellow fever, and no more cases occurred.

There was another case at Veracruz on September 5th, and I simply mention it for the information of the delegates who are familiar with this disease, so that they may take it into consideration. Said case was developed in the following manner: There is a building at the port of Veracruz, which the delegates have just seen, namely, the lighthouse office, situated more than 500 meters from the wharf, and which has just been built and decorated, the furniture thereof being entirely new. The only person living there was the keeper, and he was taken sick on September 5th. The two physicians who were called said it was a case of yellow fever. The patient had entirely recovered by the 12th. Two cases occurred in Merida, one on the 19th and another on the 21st of March, and as soon as they were discovered the patients were isolated and the small foci of infection disappeared.

These are all the cases of yellow fever which have occurred throughout the Republic.

Said cases have been described in the report, and I consider it unnecessary to go into further detail concerning them, but I now beg to make a description of our organization for protection against yellow fever. This organization has its headquarters at this Capital, and is represented by a single sanitary corps, namely, The Superior Board of Health, under the Department of Gobernacion (Interior), which receives daily reports from all the sections of the Republic, and telegraphic reports of such new cases as may occur, said reports comprising the following points:

New cases on the day the telegraphic report is made.

Total number of cases from the first day of the year.

Those who have sufficiently recovered to leave the hospital on the date the report is made.

Deaths occurring on the date of the report.

Total number of deaths from the first day of the year.

New foci of infection on the date of the report.

Total number of foci from the first day of the year.

Patients actually suffering from yellow fever who have been submitted to treatment.

Persons suspected of having the disease who were isolated on the day of the report.

Calls made at the dwellings of immunes.

Calls made at the dwellings of persons not immune, to ascertain if there are any fever patients.

Cases on trains.

Emptied water deposits.

Water deposits treated with petroleum.

Wells treated with petroleum.

This daily report enables us to discover the first suspicious case that may occur. The rules which the sanitary brigades observe in their operations are the following: As soon as the fever of a patient cannot be diagnosed as pneumonia or some other disease, said patient is isolated, and the house in which he lodged, as well as the surrounding houses, are disinfected.

Visits to houses of persons who are not immune are made in order to determine if there are any cases of illness therein.

Now I will take the liberty to show you some drawings which indicate how these visits are made in Merida and Veracruz.

Finally, we have one single center, namely, the Superior Board of Health, which receives daily reports, and brigades that may be mobilized as circumstances require. Since I have no time to discuss these points, I beg you to look at the pictures which I have made to that end and which will now be placed on the table.

Bubonic Plague.

Concerning this subject, I have to inform the delegates that since the month of May, 1903, there has not occurred a single case of bubonic plague in Mexico, and I should add that we succeeded in entirely eliminating this disease in six months. A circular has been distributed among you, which I shall submit to your consideration, and from which I shall now proceed to make some brief extracts.

1. In order to extinguish a transmissible disease in a city, the first step that should be taken is to remove the receptive element, that is to say, to diminish the population; but this should be done on the condition that only healthy persons shall leave the town, and in order to obtain this result, we established a vigilance service on all those who leave the town.

It is the duty of the commission appointed to issue certificates to all hale persons, and as soon as they have obtained these certificates they may leave the town, and we established this first rule: It is necessary to cause the greatest possible number of healthy persons to leave an infested town.

Second. All, or at least the greater part, of the inhabitants of the infested town should be vaccinated.

In Mazatlan, 3,575 persons were vaccinated, and the results obtained at Villa Unión were really wonderful, because all persons who were not ill were vaccinated. Before this operation was carried out, there occurred 34 cases, 9 of which were fatal. As soon as the disease developed, all healthy persons were vaccinated and the epidemic disappeared.

Ordinary means are not sufficient to discover suspicious cases of diseases. It is the duty of physicians to report cases of yellow fever, bubonic plague, cholera, and other plagues; but they cannot be expected to divine the diseases, so that until they have made their diagnosis, they can not make such a report. Then we established a system of house to house visits, which consists in calling at the house in order to find out if any persons are ill therein, but physicians do not ask whether there are any persons ill, but go into the house in an arbitrary

manner, and surprise the patients, so that these visits are made without the consent of the residents.

It is necessary to isolate all the patients, the same as is done in the case of all transmissible diseases, but this isolation must be done as follows: The suspected cases are kept in a special department. Any one having fever and swelling of the glands is regarded as suspicious. Those who really have the plague are sent to the lazaretto, where there are two departments, one for those who actually have the bubonic plague, and the other for convalescents, because it has been demonstrated that the disease is transmissible even four weeks after the patient has been cured.

The persons who had been near the patient remained, and tents and barracks were provided for them, situated a considerable distance from the town, and there they were fed and provided with clothes. This was a novelty we introduced, that is to say, we furnished all applicants with new clothes in place of the old ones. The disinfection was made in old houses after the patient had left the premises, but inasmuch as in all our towns, and especially those situated in the hot lands, there are many houses of reeds or canes, the roofs of which consist of dry grass, and it being impossible to make a thorough disinfection, we decided to burn said huts. Therefore, we burnt 60 huts in Mazatlan.

In order to check the disease in the suburbs of the town, we did the following: Sanitary stations were established, which it was possible to do, because at the time there was no railroad running out of Mazatlan. After a journey by carriage or horseback, the first sanitary station was established and a second one was established at an equal distance, and still another established also at the same distance as the previous one, and so on to the towns bordering on the State of Sinaloa. If any patient escaped clandestinely from Mazatlan, he was recognized at the first station, and if the disease was not discovered there, it was discovered in the following one, or at the third station, and since at the station they furnished information concerning the place of destination of the patient, it was possible to make the proper investigation in co-operation with the civil authorities of the different places indicated, and to sequestrate the patient when he could be found, and in this way the transmission of the disease was prevented.

I am going to show you a drawing illustrating the results obtained.

Malaria.

It is impossible to obtain exact data concerning malaria. The number of patients can not be considered as exact data, because there are many who are afflicted with said disease, and yet they go about the streets and fulfil their duties, and, therefore, it is impossible for the health authorities to discover all the cases of malaria.

The data concerning mortality can not be used because, as to mortality, the physicians only state the immediate cause of death, in which malaria is not mentioned, but anemia and other causes.

This is the reason why I have limited myself to indicate, by means of colors on the map of the Republic, the regions wherein this disease more or less frequently prevails.

But now I am going to propose to you something new about this subject, and which I submit to your consideration.

I shall not dwell on the means of combatting malaria, because they are well known to everybody, and shall limit myself to propose to the delegates to wage a war against malaria like that which is being waged against yellow fever.

If we succeed in convincing everyone that it is within his power to guard himself against the disease by avoiding the mosquito bite which produces it, simply by screening the doors and windows of dwellings with wire gauze in order to prevent the entrance of mosquitoes, then we shall have advanced far in this direction. My proposition, therefore, consists in making an efficient propaganda against malaria by advising everyone to take good care of himself and avoid mosquito bites. This accomplished, the action of the authorities will thereby be greatly reduced.

Transmissible Chronic Diseases.

There is yet another important thing to add to the international sanitary police, and I wish to call your attention to the following fact: Heretofore, all nations have devoted their attention especially to the protection against acute transmissible diseases, by the means to which I have already referred, but experience is teaching us that it is necessary to defend ourselves against transmissible chronic diseases.

Trachoma, beri-beri, tuberculosis and malaria have just been mentioned. Is it possible, knowing, as we do, that they are transmissible diseases, and consequently, avoidable, that we should fail to devise the necessary means to prevent them?

I call your attention especially to tuberculosis, trachoma and beriberi, and more particularly to trachoma.

I have just heard that in some places this disease is entirely unknown, but so far as our country is concerned, I would say that frequently vessels arrive at our ports with Chinese immigrants on board, among whom there are usually some patients suffering from trachoma. There was on one occasion, I remember, I was compelled to re-embark 220 patients who had trachoma, and who arrived in one single vessel which brought 600 Chinese. In another instance I caused 120 to be re-embarked, and subsequently I had to again re-embark 20 or 30 more patients of trachoma every month. Therefore, we should prevent the entrance of persons afflicted with trachoma. A law is now under consideration in Mexico to prevent the admission not only of this kind of patients, but also of those who might become a burden to the State because they are not able to work, so that the lame, the one-armed, the blind, etc., who are unable to work, shall not be permitted to enter the country.

In the report which I shall submit to you tomorrow, will appear the appropriation which the General Government of Mexico has made for the sanitation of ports. The sanitary conditions of the port of Tampico are now being improved, and the sanitation of the ports of Veracruz, Coatzacoalcos, Manzanillo, and Mazatlan is almost completed, and in all these works our Government has spent the enormous sum of $45,800,000.

The reports to which Dr. Licéaga made a brief reference will be found in full in the Appendix, page 173.

The session adjourned.

SECOND DAY, TUESDAY, DECEMBER 3.

Morning Session.

All the delegates of this Convention being present, except those of Chile, the session was called to order at 11 A. M., Dr. Eduardo Licéaga presiding.

THE CHAIRMAN. I beg the delegates not to begin this session by reading the minutes, in order to make up the time we have employed in our visit to the Penitentiary. Before we commence our regular business, Dr. Guiteras will take the floor because he desires to make a motion which will be referred to the Advisory Committee to be considered and decided upon before we end our sessions, to determine whether or not it should be taken into consideration.

Dr. Guiteras read the following motion, which, in accordance with the suggestion of the Chairman, was referred to the Advisory Committee for consideration:

"ADAPTATION OF THE CONVENTION OF WASHINGTON TO THE EUROPEAN COLONIES IN AMERICA.

"Whereas the Conference of Paris of 1903 did not include in its resolutions all the measures required for combatting yellow fever, which measures were adopted by the Convention of Washington;

"Whereas the European colonies on the American continent are not, therefore, guided, so far as yellow fever is concerned, by the same convention in force in the American Republics;

Whereas some of said colonies are frequently the foci of yellow fever;

It is recommended that, through correspondence to be established between our Permanent Bureau and that of Paris, the plan of sanitary measures against yellow fever, adopted at the Convention of Washington in 1905, be submitted to the European nations, either to be considered by them separately, or to be submitted to the next Sanitary Convention of European States, or in such other manner as may be agreed upon between the two permanent Bureaus.

"NATIONALIZATION OF SANITARY SERVICES.

"Whereas the success obtained on this Continent within the last few years of the campaign against epidemic diseases is due to the intervention of Central Governments;

"Whereas the lack of means on the part of local authorities, as well as the serious inconvenience brought about by dualism in the sanitary authorities, has been repeatedly shown;

"The Convention recommends to the American Nations the nationalization and centralization of the sanitary authority by means of legislation, and the establishment of a Department of Public Health."

THE CHAIRMAN. In accordance with the program adopted, the reading of the extracts which are to be presented by each of the delegates, will now be continued. The delegate of Guatemala has the floor.

The delegate of Guatemala then read his report, which was not read in a former session for the reasons which he has already explained. (See Appendix, page 171.)

THE CHAIRMAN. The delegate of Salvador has the floor, and will read an extract from his report.

The delegate of Salvador then read an extract of the report which he submits to the convention, in accordance with the provisions of the program, and which will be found in the Appendix, page 188.

DR. WYMAN. Mr. Chairman: We have with us this morning the Secretary of the Bureau of American Republics—the Acting Director at the present time—who has come from Washington to show the interest of the Bureau of the American Republics in the Convention.

I move, Sir, that the privileges of the floor be granted to Mr. Yanes, Secretary of the Bureau of American Republics.

DR. JOHNSON. I second the motion.

DR. YÁNES then delivered in Spanish the following address:

In view of the existing relations between the International Bureau of the American Republics, which I have the honor to represent, and the international sanitary conventions, it is perfectly natural that this Bureau should desire to be with you here on this important occasion, and to that end I have come from Washington, commissioned by said Bureau, as the bearer of the cordial greeting of the Bureau and its Governing Board, who sincerely wish you Godspeed and the greatest success in your humanitarian work.

The Honorable John Barrett, Director of the Bureau, contemplated coming personally to greet you, but inasmuch as just at this time the Central American Peace Conference is being held in Washington in the offices of the Bureau, he entrusted to me this highly appreciated honor, with the express request that I should personally represent him and greet you in his name.

This is a gala day for the International Bureau of the American Republics. It is the first time in the history of the Bureau that two events of transcendental importance for Pan-America are taking place simultaneously. There, in Washington, under the same roof that shelters the Bureau, the Central-American Peace Conference, as I said before, is holding its sessions, a Conference brought about through the noble, great, disinterested and friendly initiative of the two eminent statesmen who guide the destinies of Mexico and the United States. This friendly suggestion was carefully accepted by our brethren of Central America, full of hope in the future, for the purpose of seeking a peaceful settlement of their differences.

Here in this beautiful and legendary City of Mexico, the cradle and home of many illustrious men, in response to the call of the International Sanitary Bureau, extended to the Governments of the International Union through the Bureau of the American Republics, the representatives of the medical science, high-minded and brave warriors that they are, have assembled to again hold a conference of learning, their noble and sole ideal being the welfare of mankind.

This is the third time that the Bureau of the American Republics attends your conventions, and also the third time it has felt proud to see assembled the great scientists of Pan-America—from pole to pole—united in behalf of the common good. Co-laborers in a holy cause,

genuine representatives of the most lofty altruism, you come to this tournament of learning to teach the whole world all you have discovered by burning the midnight oil, in your long hours of vigil at the bedside of the sick, in the solitude of your libraries, struggling against mystery, armed only with your conscience, in order to avoid the evils afflicting mankind, to prevent contagion and to improve the conditions of the poor, who are ever the greatest victims in all great calamities.

Not only Pan-America, but the whole world, has followed, step by step, your struggles and your triumphs since you met for the second time in Washington, and the world hopes to learn what progress you have since made and what plans you have formed for the future. (Applause.)

THE CHAIRMAN. Without prejudice to the right of the delegate of Ecuador to read the extract from his report tomorrow, we shall now proceed to discuss the measures of International Sanitary Police relating to yellow fever.

I should like to know if any of the delegates has any objections to make. As no one desires to make any remarks, I will take the liberty to say a few words.

Gentlemen: Inasmuch as the object of our meeting is to continue to study in detail all such processes as may be efficiently employed in behalf of mankind, especially concerning the transmission of contagious and infectious diseases, I will now explain the method we have been following in Mexico for many years.

Our sanitary provisions do not change measures that have already been accepted. I here and now declare that I accept the resolutions adopted by the Second International Sanitary Convention concerning yellow fever. I make this explanation because what I am going to say deviates somewhat from the practice recommended therein; but since said practice is recommended so that one nation may not injure another, it does not limit in any sense the right to make said practice less severe if it deems it can better protect itself by so doing.

The manner in which we defend ourselves against yellow fever is based on the resolution adopted by the Dresden Convention, and by the first Convention of Paris, which have not been modified in Europe, as Dr. Guiteras has pointed out.

The International Convention held in Paris in 1903, devotes only one article to yellow fever, in which it recommends to the countries where the yellow fever stegomya exists, that their sanitary provisions should be in accordance therewith, but Dr. Guiteras has presented the question under a very interesting aspect. Instead of the Paris Convention coming to Pan-America and advising them to make their rules and regulations so that they will conform to the knowledge that medical science now has concerning yellow fever, it is Dr. Guiteras who now suggests to the Paris Convention that it be guided by such rules and regulations as we have adopted, using them as a model in preparing their rules and regulations to be put in force in their colonies where yellow fever prevails.

This interchange of views and experiences is of unquestioned utility, and we see it every day. The Convention of Paris advises us to adopt certain measures; we thereupon accept them, and after having carefully studied the same, we return them modified to said Convention.

The object of this preamble is simply to explain that what I am going to say is not against the resolution adopted, but only to state what we do in Mexico.

We do not make the inspection just as prescribed in the Sanitary Convention of Washington. Now the inspection of healthy passengers on board of vessels consists in the complete isolation of said persons until six days shall have elapsed, while in Mexico we only watch said persons.

In accordance with the Convention of Paris, the vigilance consists in the fact that healthy persons on board a vessel coming from a port infected with yellow fever, may land and be granted free pratique, but they are, nevertheless, watched, during the days remaining in order to complete the six days of inspection.

This practice, which is the one we observe, forms a part of our Sanitary Code. We have no place in which to isolate yellow fever patients, so that when a vessel arrives, the health officers make the inspection visit, and examine each of the passengers, takes his temperature to determine whether or not he has fever, and if he has no fever the following distinction is made:

Nothing is done to persons who show that they are immune concerning yellow fever, and those who cannot prove that they are immune as to said disease, are divided into two classes, namely: one comprising those whose destination is the Central Plateau of Anahuac, 2,000 meters above sea level, where the stegomya does not procreate. Experiments have been made to breed them, but they have hardly been able to live two weeks.

Therefore, persons who intend to go to the Central Plateau of the Republic are not neglected, but are taken to said plateau, being sure that they will not spread yellow fever even though they are infected with it.

The other group consists of persons who intend to remain at the ports of arrival, or in such places on the coast where we now know that yellow fever has existed. Said persons are not isolated, but are watched by the authorities charged with the performance of this duty, and he does so in the way I indicated to you yesterday. It is the duty of sanitary brigades to daily visit persons who are not immune, keeping a special record of those who enter and leave, watching them for a period of five or six days, that is to say, until the end of the vigilance period, or until the date they are taken sick. We have followed this method for a long time with excellent results, and consequently, I have arrived at the following conclusion: The more severe the provisions adopted to prevent the intercommunication of people, the more difficult it is to obtain this result. To illustrate this fact, I shall avail myself of the examples afforded by the besieged and the besiegers. In a besieged city, the besiegers show as much interest in preventing the escape of the besieged as the latter are interested in preventing the entrance of the besiegers. This is the problem, and yet it is seen that the besieged go out, and that the besiegers enter. If such intercommunication can not be avoided in besieged cities, how could it be avoided in the case of ports?

Some people arrive at a port who greatly desire to continue their travel in order to join their families, or to continue their business,

or guided by their natural instincts, desire to be free, and such persons have no special reason for concealing their name, their place of residence or their destination. They freely give us this information, and it is because of this that we have succeeded in discovering all the cases in all the places where yellow fever may spread. I thought it was of the utmost importance to advise you of these results, because I have felt that it might be useful for you to know what we do here, and as soon as we have exterminated yellow fever entirely these provisions may be put in practice generally in other countries, but I repeat, that these remarks made to you concerning the methods we follow, do not mean that we object to the articles relating to the matter of the Convention to which I have just referred. (Applause.)

Dr. Guiteras. In the first place, I wish to state that the extraordinary success recently obtained in Mexico concerning yellow fever does not seem to me to be due to the manner of treating persons suspected of being afflicted with that disease coming from abroad, that is to say, that when Dr. Licéaga explained, as he has done, the method employed in this country in receiving passengers coming from countries where yellow fever prevails, the excellent results obtained here during the last two years seem to confirm his statements. But what I wish to say is that this way of receiving passengers has nothing to do with the brilliant results obtained, or, in other words, that it seems to me that the system followed in Mexico with regard to passengers coming from countries where yellow fever prevails has not yet been thoroughly tried.

As a matter of fact, during the last few years Mexico has not been exposed to the introduction of yellow fever, except in a very remote way. I will mention the following example: There have been very few cases of yellow fever in Cuba, the disease having disappeared almost simultaneously in the ports of Mexico which have communication with the former country.

So that what I simply wish to state is that I do not believe this process of admitting to the country, without previous inspection in a suitable place, the persons infected with yellow fever, has been properly tried.

I fear if this country were exposed to a serious invasion of the disease, for instance to great epidemics on the Gulf of Mexico and on the south coast of the United States, I fear, I repeat, that the results obtained would not be so satisfactory. It seems to me that there is some danger in following this system.

On the other hand, it should be borne in mind that in the Mexican Republic, like other countries exposed to the introduction of yellow fever, there is a large extent of territory to which the great current of immigration flows, and where, as Dr. Licéaga has informed us, yellow fever can not spread. I believe, therefore, that I am right when I say that the greater part of the immigrants who enter the Mexican Republic go to that section of the Republic, that is to say, to the Central Plateau, where it is impossible for yellow fever to spread

On the other hand there are countries like Cuba, for instance, where there is not a single nook, where yellow fever does not prevail, and where the stegomya does not exist.

So that, I still believe that the process explained by Dr. Licéaga

would, in the case of a severe epidemic, it seems to me, be a failure. At least I fear it would be so.

THE CHAIRMAN. I beg to make an explanation showing exactly the idea I meant to convey.

Dr. Guiteras believes that I intended to say that one of the elements for preventing the spread of yellow fever, is the manner in which we rceive people from abroad. Now I simply state that, although we have not the restrictions in force in Cuba, yellow fever has not been introduced into our country by means of the system we employ. As to his second contention, I do not pretend that said system should be accepted in countries different from ours, but I simply stated what we do.

It is true that a great number of people from abroad go to the Central Plateau, but it is also true that many persons remain at different places on the coast, to such an extent that all the work done on the plantations in those sections is done by immigrants, which places are most exposed to yellow fever. I should add that in Veracruz alone there are 10,000 persons who are not immune.

DR. WYMAN. I feel that I should not allow this occasion to go by without saying a few words apropos of the subject under discussion. The discussion illustrates the fact that while general principles will hold good between countries, here are different conditions in each country which force themselves upon the sanitary authorities of the respective countries. The system adopted by Mexico is admirable, and is effective with regard to Mexico, and so far as its underlying principles are concerned, the same practice really prevails in the United States.

For example, people coming from foreign countries infected with yellow fever are subject to no restriction or restraint; to no detention, at points north of the southern boundary of Maryland, that is to say in non-infectable territory. Just as you allow anybody from a foreign infected territory to land at Veracruz and come direct to Mexico, where the state of yellow fever does not exist, so would we allow anybody to come to Boston and pay no attention to them, even if there were a yellow fever epidemic in Havana or in Central American Republics.

If a ship arrived, we would do no more than inspect that ship and remove anybody that happened to be sick. But there is no detention. We would inspect the ship, inasmuch as the ship might afterwards go down to points on the southern coast which are in the infectable territory.

So these principles are practically the same, but in their application we have to give consideration to the special conditions existing in different parts of the country.

Another thing: In Mexico you have on the Atlantic coast but two or three important seaports. We are obliged by our law to have uniformity of quarantine regulations otherwise it would not be fair to all, and we have in the United States a large number of ports in the infectable territory, and it is absolutely necessary for us to administer our quarantine regulations just as we do; but where feasible, as in the north, or in ports north of the southern boundary of Maryland, there is no particular restriction or restraint, excepting at the port of New York, where persons still in the incubative period of yellow fever, if

they have been attacked with that disease before leaving an infected foreign port, might pass right through New York and take a railroad train to the South and land in infectable territory before the period of incubation had passed, and thus develop the disease within infectable territory.

Therefore, while there is apparently some difference in our viewpoint, I think that really we are all acting upon the same principles somewhat differently applied, according to the circumstances.

DR. GONÇALVEZ CRUZ. In order to show the value of sanitary vigilance in the prophylaxis of yellow fever, I will for a moment call your attention to the city of Rio de Janeiro, in which there were places entirely free from yellow fever, and others where it did prevail. Even persons who were immune, residing in the foci of infection, were submitted to daily inspection as far as possible. This system was of undoubted advantage, and by means of it the spread of the disease was prevented, but it was necessary to immediately isolate all yellow fever patients in order to prevent infection by mosquitoes which exist in the city.

THE CHAIRMAN. If there are no other remarks the meeting will adjourn.

I beg to remind the delegates that today at 3 P. M. they will be received by the President of the Republic. I would request you to be there at that hour, because the President will be at the Palace at that time, and if he should not be there it will not be our fault.

After that we will take an automobile ride, and then will take tea at the Chapultepec Cafe—a tea which is given in honor of the delegates and to which the ladies are also invited.

I beg to remind the Secretary that all persons desiring that their reports be inserted in the minutes, must furnish extracts of the same at the end of the session.

I now beg the delegates to kindly accompany me on a visit to the Post-Office Department.

The session adjourned.

THIRD DAY, WEDNESDAY, DECEMBER 4.

Morning Session.

The meeting was called to order by the Chairman, Dr. Licéaga, at 9 a. m., the following members being present: Doctors: Gonçalves Cruz, Payán, Roberts, Guiteras, Soza, Esteves, Wyman, Ezdorf, Straub, Gatewood, Rhett-Goode, Johnson, Ortega, Azurdia, Lazo Arriaga, Mendizabal, Gonzalez, and Secretary Ulloa.

The minutes of the second and third days being open to discussion, Dr. Guiteras, representative of Cuba, was granted the floor, and said that the remarks he made in the previous session had been delivered by him in writing in a more comprehensive form than they appeared in the minutes just read.

Secretary Ulloa stated that the remarks made by the delegates would appear in full in the minutes which would be published at the close of the Convention, and therein will be found in full the remarks made by the representative of Cuba.

The representative of Brazil made the following explanation:

The isolation of yellow fever patients in Rio de Janeiro is very rigorous, and medical vigilance constitutes an additional measure, and does not substitute the isolation as stated in the minutes. The minutes were approved.

The Chairman granted the floor to Dr. Esteves, of Ecuador, to read his report, which was pending.

Dr. Esteves. Before reading my report, permit me to state that the bubonic plague, trachoma and beri-beri are unknown in Ecuador; we have yellow fever and malaria, and sometimes we have smallpox. Yellow fever is endemic in the country, but in certain seasons it becomes epidemic. Malaria occurs in different forms, and with regard to smallpox, it generally occurs only among persons who have not been vaccinated.

He then read the report that appears on page 169 of Appendix.

The Chairman. The discussion which was to take place this morning relates to such measures of international police against yellow fever as are proposed in the papers or reports of the delegates, but since this was done in yesterday's session, the discussion on malaria belongs to this session, apropos of the same papers or reports.

Dr. Wyman desires to call the attention of the delegates to a paper on measures of international prophylaxis in order that it may be referred to the Advisory Committee to be studied and acted upon. Dr. Wyman has the floor.

Dr. Wyman read the following propositions:

First. International Conference on health matters have heretofore considered only the management of epidemic diseases in their progress from one nation to another.

Second. These diseases are simply the result of unhygienic conditions in the several countries.

Photo Harris and Ewing

DR. EDUARDO LICÉAGA, OF MEXICO,

President of the Third International Sanitary Convention of American Republics.

Third. These unhygienic conditions are local, and the responsibility on their account lies with municipal or State authorities.

Fourth. The national governments therefore are required to deal with conditions due to faults of the States and municipalities.

Fifth. In the measures to prevent the spread of disease from one country to another, plainly the duty of national governments, the latter are theretofore dealing only with the effects and not with the cause; they are dealing with the symptoms rather than with the causative conditions.

Sixth. Therefore, notwithstanding that the *fons et origo* of disease is ordinarily considered as within the legal jurisdiction and administration (police power) of the States and municipalities, the national governments must find some means of exercising effective influence in these local conditions which produce disastrous effects that quickly become the care and responsibility of the nation.

Seventh. Quarantine and quarantinable diseases which heretofore have been the subjects of international conventions and agreements should now be put to one side as having been duly considered and acted upon; and an advance should be made in international deliberations by the consideration of hygiene and sanitation. In other words, the deliberations of international sanitarians should be transferred from ships to the shore.

Eighth. In considering the possibility of an international agreement for a more direct and effective influence of the national governments in local sanitation and hygiene it will be more practicable to limit such agreement to seaport cities and towns, since these are the points of contact between nations.

Ninth. In the effort to perfect the sanitary and hygienic condition of seaports we find an international commercial justification therefore in the resultant elimination of yellow fever. There is another all important disease—tuberculosis—for whose elimination the commercial reason does not apply, but against which the whole civilized world is making warfare. This disease, on account of its universality and contagiousness, is well worthy of consideration in international agreements, irrespective of the commercial relations between nations.

Tenth. In the sanitary and hygiene measures necessary to eliminate the two above-mentioned diseases—yellow fever and tuberculosis—are embraced the sanitary and hygienic measures (with the exception of minor details) necessary to overcome all the greater epidemic and the domestic contagious diseases.

Eleventh. The more specific the objects of any agreement, the more direct and effective will be the efforts to enforce it. Therefore there is recommended an international agreement for national effort in sanitary and hygienic measures necessary to eliminate yellow fever and tuberculosis.

From the foregoing propositions it appears necessary that the central or national government of each republic should give greater attention to local sanitary measures. It is admitted that the activity of the national government in local sanitation is more difficult in some of the republics than in others, yet it is believed that in all much can be accomplished beyond the present activities and beyond the limitations which now seem to be acknowledged.

The proposed limitation of an international agreement to seaports is defended by the following considerations:

First. Seaports have a more direct influence in conveying disease from one country to another than interior ports.

Second. The good effect of sanitation in seaports will be so obvious that interior cities will take note thereof and profit by the example.

Third. By making the agreement relate to seaports only the scope thereof is limited and defined and the plan, therefore, more practicable.

It may be remarked that in many of our larger seaport cities, such as New Orleans, Rio de Janeiro, Veracruz, and others, sanitary improvements of a broad character, such as improved water supplies, sewerage, drainage and paving, are already under way.

In quite a number of the smaller ports, particularly in some of the Central and South American republics, there has been manifested dur-

ing the past four years an awakening to the need of sanitation and actual work has been done. But in all our larger ports, no matter how extensive the improvements, much remains to be done to bring local sanitation and hygiene up to the required standard, and in numerous smaller ports in all of the republics both on the Atlantic and Pacific coasts, sanitation is at the present time outrageously neglected. These smaller seaport towns and cities are potent factors in the breeding and dissemination of disease, and yet their proper sanitation would involve comparatively moderate expense.

In considering local sanitary measures it is worthy of note that measures to eradicate and prevent two of the most important diseases will be sufficient practically for the eradication of other communicable diseases.

Sanitation for tuberculosis requires sufficiency of air and sunlight in domiciles, good water supply, drainage and sewerage, while the sanitation for yellow fever, demanding the removal of collections of water to prevent the breeding of mosquitoes, involves general hygienic conditions of premises, so that with the cleanliness in and around the domicile and assurance of the proper environments of man, conditions are produced favorable to the elimination of all disease.

The whole civilized world is fighting against tuberculosis, the great white plague, which causes at least one in seven of all deaths, and any international agreements for its suppression will redound to the honor of every nation concerned therein. As to yellow fever, a disease which is the curse of the Western Hemisphere, conjoint action of the republics is necessary for its elimination.

It is, therefore, respectfully recommended that the central or national administration of each republic will use its utmost endeavors to institute and enforce locally in its several seaports all the sanitary measures destructive, constructive and administrative, which are necessary to eliminate tuberculosis and yellow fever.

In addition to the reasons given above showing the necessity for such an international agreement, there are others which, though less urgent, should nevertheless lend encouragement thereto. It gives opportunity for the countries represented in the Rio Conference to set an example which may be utilized in the coming Hague Conference, at which it is understood all the republics of the Western Hemisphere will be represented.

In the present relations of nations with one another there are two facts which seem strangely at variance: First, the regularly increasing naval and military armaments; second, the rapidly growing sentiment for universal peace and disarmament.

Few will deny that universal peace is a desideratum. It is said that it is the purpose of the Interparliamentary Union to make of the Hague Conference a permanent body composed of two houses—an upper house representing the executives of the world, and a lower house composed of the members of the highest legislative bodies of the powers of the earth.

Even if such a body is formed it would be marvelous if of itself it should be able to bring about a disarmament of the nations. Increase in armaments provides increase of employment of all kinds—manual, professional, and administrative, and furnishes an outlet for the energy

of a nation. It is worth considering whether a diversion of this energy is not more practicable than its abrupt termination.

A celebrated manufacturer in the United States, with a plant covering several acres, was much annoyed by the mischievous activities of a large number of boys in the neighborhood who trespassed upon the property, maliciously injuring the same. Instead of arresting them and causing their punishment, he diverted their energies by purchasing land immediately around his plant and employing them in the development of lawns and gardens, thus adding to the attractiveness and utility of his possessions and transforming his annoying neighbors into agents of help.

This may be a homely illustration, but surely an international hygienic agreement which would demand physical operations of great scope, and professional and administrative energies of the highest character would be more effective by diverting such energies from naval and military establishments than would be an effort to discontinue or abandon the military and naval armaments.

The same principles apply whether reference is made to disarmament, arbitration, or the world-wide movement for peace.

An international agreement for sanitation, with the avowed purpose of eliminating communicable diseases, will furnish a plane upon which nations may meet; and an object for attack against which all nations may combine without fear of international complications.

THE CHAIRMAN. As I stated before, the propositions made by Doctor Wyman will be referred to the Advisory Committee.

The representatives of Colombia have some other proposition to submit to the delegates before commencing the discussion on malaria.

The representative of Colombia has the floor.

DR. GUTIERREZ. I submit the following proposition to the Advisory Committee:

Whereas, it is a scientific fact that vaccination is the best prophylactic means of avoiding smallpox.

Whereas, many civilized nations have enacted laws making vaccination compulsory; and

Whereas, the conditions prevailing in many of the nations we represent, favor the development and spread of epidemic smallpox.

The Convention resolves, To make known to the Governments represented in this Convention the benefit which each nation would derive by making vaccination compulsory.

In order to render their action still more efficient, the advantage of cultivating the vaccine virus in each country and the distributing of it gratis among the inhabitants, is recommended.

As a result of the foregoing, to open a vaccination registry in the cities, towns and villages, in order that the local and duly qualified physicians as well as those who are members of the Board of Health, may issue the certificates required for entrance into municipal and national schools and institutes, and such other establishments as may require them.

The above was referred to the Advisory Committee.

DR. AZURDIA, representative of Guatemala. The resolution I have the honor to present, I think should be referred to the Advisory Committee.

I believe that nations as such should make their sanitary police exclusively defensive in behalf of friendly nations with which they maintain commercial relations, in such way that I entirely agree with the opinion already expressed by Dr. Licéaga concerning the fact that

the origin of contagious diseases should be combatted and that we should never ask friendly nations to do so.

In view of the above, in the case of malaria, and in connection with all I have had occasion to observe in the countries afflicted by such disease, it seems to me that it would be advisable for the Convention to adopt the following resolutions, which I respectfully propose:

RESOLUTIONS AGAINST MALARIA.

Whereas, notwithstanding the general method adopted for combating malaria by the destruction of mosquitoes, the application of petroleum to stagnant waters, etc., the efforts made by some countries have not met with success.

Whereas, with the assistance of the Government malaria could be effectively prevented instead of having to be cured.

It is recommended:

1. That quinine salts be declared free of import duties in all countries afflicted with malaria.

2. That industries engaged in the manufacture of quinine salts shall be fully protected by the State.

3. That fine mesh wire gauze used for mosquito nets, the protection to dwellings, offices, halls, etc., in order to prevent the admission of mosquitoes, be also declared free of import duties.

4. That it shall be the duty of the Permanent International Sanitary Bureau to recommend the publication, *in extenso,* of the best treaty or work, in which are compiled in a brief, simple and practical form, readily understood by the people, the aphorisms constituting the bases of what may henceforth be called the struggle against malaria, and said Bureau should make a propaganda concerning this movement, and suggest such prize as the author of the best work on the subject may be entitled to.

THE CHAIRMAN. I suggest that, like the former ones, this proposition be referred to the Advisory Committee. Dr. Mendizabal has the floor.

DR. MENDIZABAL. Mr. Chairman and delegates: It is surprising to me that in this defense which the nations have commenced by mutual agreement to protect themselves against certain diseases, they have never taken into consideration others which cause as much or greater ravages than those we are now discussing. I refer, gentlemen, to syphilis and venereal diseases, which are really formidable. It seems to me that we ought to devise the means of protecting the people against these diseases, and of avoiding the spreading of the same.

Heretofore nothing has been done along these lines, and no measures have been taken against those afflicted with such terrible diseases. For instance, a woman afflicted with syphilis lands at one of our ports, and spreads the disease in an indefinite manner; and we all know the baleful influence which this terrible disease exercises over the whole human race. Now that we have such simple means of accurately diagnosing said disease, since we have advanced beyond the bounds of hypothesis, why not adopt a resolution which would exterminate this disease? Why should we not defend each other against such a disease, which, as I said before, degrades the human race, and is a germ which entirely ruins the human organism?

Every day we treat patients with heart disease, disease of the liver, and other diseases known to the delegates which have no other origin but venereal or syphilitic diseases, it being very noticeable above all, how they are inherited by children. A visit to a hospital will show many diseases which have been contracted by venereal infection.

Therefore, I would suggest that we discuss this matter which, as I said before, I consider of the utmost importance.

THE CHAIRMAN. What Dr. Mendizabal has just said is very important, but as this point is not, unfortunately, comprised in the program, and we have to confine ourselves to the latter, I would request him to make his proposition in writing in order that it may be one of the subjects of the next Convention, since this matter could not be decided in the short time we have at our disposal.

DR. GUITERAS. If the Chair allows me, I wish to present a resolution on malaria.

THE CHAIRMAN. I beg to make a remark. If we are going to open a discussion on malaria, it would be preferable that the proposition should come after the debate.

DR. GUITERAS. I did not ask the floor in order to discuss, but to present a complete proposition which I desired to add to the Washington Convention, but it seems to me better to present the same after the debate on the point indicated by Dr. Licéaga.

DR. LAZO-ARRIAGA. Mr. Chairman, I desire to add something to the proposition presented by Dr. Azurdia, and in this connection I would request the Chair to allow me to read it.

THE CHAIRMAN. If what Dr. Lazo-Arriaga is going to propose relates to the proposition made by Dr. Azurdia, he has the floor.

DR. LAZO-ARRIAGA. Gentlemen: Dr. Azurdia, of Guatemala, presents to this Congress some propositions relating to the means which should be employed in order to avoid or decrease the ravages of malaria.

Agreeing entirely with the views of my distinguished colleague, it seems to me that there should be added thereto a recommendation to the end that periodical lectures be given, in the school, on the easy means which science furnishes to all the inhabitants of the tropics in order to avoid malaria.

THE CHAIRMAN. The proposition of Dr. Lazo-Arriaga is referred to the Committee on Malaria.

DR. GUITERAS. In my opinion the concrete propositions should be submitted to this Convention after the point on malaria shall have been discussed. It seems that Dr. Licéaga is willing to discuss malaria, and it also seems to me that he affords us the opportunity for presenting new propositions. For this reason I would like to hear this discussion in order to present my concrete propositions afterwards.

THE CHAIRMAN. In view of the kind suggestion just made by Dr. Guiteras, I beg to open the question to discussion, not that I entertain any doubt of its being known by the delegates, but because it is necessary to fix the terms of the debate. Although what I am going to read may be known to you, yet it is necessary to read it in order to carry on the debate in the proper way.

Dr. Licéaga then read the report on malaria, which appears in the Appendix, page 181.

DR. GUITERAS. I have heard with great satisfaction that Dr. Licéaga proposes to devote all his energies, as well as all the personnel that at present is combatting yellow fever, to likewise attack malaria, as soon as the other disease is entirely banished, and there is no doubt that the result will be just as brilliant as have been the results obtained con-

cerning yellow fever. The success obtained against this latter disease, predicts a victory with regard to malaria.

But even before we reach that moment, it may be affirmed that the campaign which is being waged against yellow fever is already indirectly exercising its influence against malaria.

The campaign we have waged in Cuba against yellow fever, has wonderfully decreased the number of deaths caused by malaria. The exact figures may be seen in the report presented by my colleague.

But there is another point of view to which Dr. Licéaga has not referred in his admirable report. I refer to the decisive influence which quarantine may have had against malaria.

It has happened in Cuba that the number of immigrants afflicted with fever coming from ports infected with yellow fever, has been greater in the case of malaria than in that of yellow fever. So that of the suspicious cases which our Marine Sanitary Board sends to Las Animas Hospital, a great number is infected with malaria. These patients remain at the Hospital until they are cured, and I would add that in this manner the number of patients which enter in the territory of the Republic has been considerably reduced. Based on this experience, I am going to make a motion to the Convention.

Dr. Johnson proposed that the name "Malarial Fever" be substituted for "Anopheles fever."

Dr. Mendizabal. Gentlemen: I will commence by congratulating Dr. Licéaga for having presented to us, with the clearness of a catechism and with the scope of a hippocratic aphorism, the doctrine of the campaign against malaria. I have always been concerned with the question of the transmission of this disease, but the places where it has prevailed have concerned me much more. I have practiced my profession for many years in the centers of malaria where there were from ten to twelve cases daily of malignant fevers, which used to kill the patients in 24 hours, and which did not attack strong persons, even though quinine was not used. On the works of the Mexican railroad, the first to contract malaria were the workingmen who made the large excavations, and who generally came from the central plateau, but those who lived in accordance with the rules of hygiene did not need to use quinine. This disease did not spread among my colleagues and employees of certain rank, owing to the fact that we observed the rules of hygiene. Dr. Guiteras suggested that by establishing quarantine against patients, the spreading of the disease could be avoided. It seems to me that this would be an easy thing on sea, but on land it would be impossible because mercantile transactions would thus be interrupted, and, therefore, this proposition, which is easy in theory, would become impracticable.

I believe that lectures, even to very young people, would give better results and be more practicable, because in this way men are taught from childhood how to guard themselves against this disease, that is to say, by means of nourishing food, clean clothes, etc.—a training which can only be had from the time of school days. I would, therefore, prefer that the necessity of hygiene be clearly demonstrated, as well as the necessity of rendering the locality immune by sterilization, a result which cannot be obtained except by hygiene. Therefore, I understand that the prophylaxis of this disease should be commenced

with a campaign in the schools in order to obtain the best results. We have an example which we should bear in mind: the great Japanese army has been kept healthy in the midst of terrible struggles which it was able to withstand because of hygiene, and without recurring to other means. With regard to the changing of the name of the disease, I do not agree with the opinion of Dr. Johnson, because it is very likely that at any time it may be said that anopheles does not produce the disease, and another kind of mosquito is already said to produce the disease. Therefore, I would continue to call the disease "Malaria" by which it is universally known, and by this name people generally will know how to protect themselves against the disease.

THE SECRETARY. The present discussion is very interesting, and in my opinion is the most important one that we have to consider, inasmuch as malaria, in its different forms, is the greatest enemy of the inhabitants of this Continent. Dr. Licéaga has presented us a work on this subject which will serve us as a guide in our discussions, and the remarks made by Doctors Lazo-Arriaga and Azurdia are no less learned. Although I do not entirely agree with the views of Dr. Mendizabal, I beg to make the following remark: It seemed to me that Dr. Guiteras did not propose that quarantine measures should be taken against malaria, but that he referred to the quarantine that was indirectly established against malaria when it was established against yellow fever.

In regard to the suggestion of Dr. Johnson, who proposed that the name of the disease be changed, I would add to his proposition the word "MOSQUITO," because the people for whom we mainly make our provisions do not know what "ANOPHELES" is, and if they are told about the fever of the mosquito anopheles, they will then understand that a mosquito is meant, and will take the proper preventive measures.

These are all the remarks I have to make at present. When we come to discuss the respective recommendations, I may perhaps have something else to say, since all the delegates have treated many cases in their respective countries, we may have something to say of what we have learned from practice and experience in our own.

DR. LAZO-ARRIAGA. As we are discussing the proposition made by Dr. Johnson, I take the liberty to make a remark. Are all of us convinced, or rather has science already demonstrated as a scientific fact, that the only and exclusive cause of malaria is the anopheles? If this is not so, would the change of name be proper? It seems to me there is yet some doubt concerning this matter.

DR. GUITERAS. Regarding the name by which malaria should be known, I agree with Dr. Mendizabal as to the difficulty which would be encountered should we pretend to give to the disease the name of the mosquito, and although I do not know as to other countries, yet with regard to Cuba I do know that in the greater part of our territory, the mosquito which transmits the disease is no longer comprised in the anopheles species but also in the Cellia. As to there being another way of transmitting malaria, it seems to me that we might exclude this point from our discussion, and, as a practical hygienist, I would add that there is no other way of transmitting malaria.

DR. AZURDIA. I have something to say on the remarks made by Dr. Mendizabal concerning quinine. As is well known, there are two en-

tirely different means of combatting malaria, namely, the prophylactic and the curative methods; and from the prophylactic point of view, we should establish that quinine is not only curative but also preventive. In view of the above, the idea being generally accepted that we should not consider the use of quinine as indispensable as is the observance of hygienic rules I believe, nevertheless, that it may be adopted as a preventive in combatting malaria.

As to the name proposed by Dr. Johnson, I regret not to agree with him. Dr. Guiteras has stated that in Cuba the mosquito which transmits the disease is not the same, and among us malaria is known by the name of "paludismo," fevers, etc., etc. Consequently, the change of name would not bring about a general knowledge of the disease, but it would rather be the scientific denomination of the disease.

Dr. Mendizabal. I was not opposed to the use of quinine; I think that until the people are able to protect themselves, it is our duty to recommend it; I only said that I did not find it as efficient as hygiene.

Dr. Gonçalvez Cruz. I believe that the prophylaxis of malaria can not be carried out in a schematic way, and that it is advisable to study the regions where prophylaxis should be put in practice on the works in the construction of railways, in the captation of water, in the armies while on the field, in the commission on exploration, etc. Prophylaxis should be carried out using quinine as a severe treatment of the patients.

In our cities, towns, farms, etc., prophylaxis should be put in practice waging war against mosquitoes, protecting the houses, railroad stations, etc., by means of wire gauze. In these different regions, it is preferable to study the species of anophelines existing therein, as we have seen them in Brazil, especially in Sierra de Santos, where malaria is transmitted by a small mosquito called Myzomya Lutzi, which penetrates wire gauze of half a millimeter in thickness, and which instead of living in swamps finds a special way of reproducing itself in the cavities of the leaves of certain plants such as bromelias. It is for this reason that prophylaxis should not be put in practice schematically, but should be oriental whenever in compliance with superior orders, it shall have been established in said regions.

Dr. Johnson. Mr. President, I would like to join the other gentlemen in congratulating Dr. Licéaga on the importance of his remarks with regard to malaria.

I wish to add that in our section of the country malaria is very potent in intensifying the symptoms and the nature and extent of other diseases. It is therefore most important that the disease, which modifies so many other diseases, should be removed from our midst if that be possible.

In the paper which I read at the Second International Sanitary Convention, I drew attention to what appeared to me to be a valuable suggestion with respect to the terminology of this malady and selecting a name which would at the same time indicate its etiology. I suggested therefore that malaria should be known as *anopheles fever,* on the ground that if the public understood the causation of this disease, it would greatly facilitate the sanitary work in exterminating it and therefore we would have the support of the public at large in our efforts. I, therefore, renew the suggestion on this occasion that we no longer use the term *"malaria,"* and suggest *"anopheles fever."* In

the world at large we believed the disease came from bad air. As a matter of fact it came from bad water as carried about by the mosquito. Now it is known to be propagated by the mosquito. I would suggest that it be known by the name of *"anopheles fever."*

DR. JOHNSON. I simply rise to say that in my paper at the last session I referred to that point, that it should be *"mosquito fever,"* or *"stegomya fever,"* indicating the kind of disease.

Now, as we progress in our study of the disease, there seems to be the suspicion that other mosquitoes are engaged in other diseases—for instance dengue fever. I think it is well to use the term "mosquito fever" and indicate which particular kind is referred to. I accept the suggestion of Dr. Ulloa, with that modification.

GEN. WYMAN. I would like to inquire of the two gentlemen, Dr. Guiteras and Dr. Cruz, whether these are species of the general class of anopheles or not.

DR. GUITERAS. Of the anophelenas, yes. They belong to the anophelene family, but they belong to different genera.

DR. VON EZDORF. In line with the proposition of Dr. Licéaga to commence a crusade against malarial fever, I might add that lately we have acquired the quarantine stations in the South, Mobile and New Orleans. I can speak for New Orleans; there we have been detaining all passengers with malarial fever coming from the Central American and Mexican ports, in fact from all the Gulf ports in the south, and the same condition has been experienced in my station as with Dr. Guiteras, that all the cases proved to be malarial fever, with the exception of twenty, which were typhoid fever. I found the malaria parasite in all the cases, proving positively that they were malaria. Nearly all of them proved to be the aestivo autumnal form, and we know this form causes a great deal of difficulty in making a definite diagnosis between yellow fever and malaria. I think it is an excellent idea that we should take the additional precaution to isolate and hold malarial cases at quarantine stations until all doubts are removed that they are not complicated with yellow fever.

The other cases—the typhoid cases—gave us a great deal of trouble in making diagnoses, but the malarial seemed to be the most prominent. I held all such cases of malaria and typhoid fever at the quarantine station, permitting the vessel to proceed.

The point I wish to make is that the individual with a fever, be it malarial or typhoid, was held in quarantine at my station for observation and treatment, thereby establishing a practice of quarantine for these diseases. I had no cases of yellow fever this year.

It is evident that my practice reduced the possibility of adding infection of malaria and typhoid fever in a community—where the spread of these diseases was favored.

I consider this practice justifiable, and I favor the recommendation of Dr. Licéaga to isolate malarial fever cases arriving in the active stage of the disease.

DR. GUITERAS. Mr. Chairman, I beg to make the following proposition in order to submit the same to the Advisory Committee as an addition to the Convention of Washington:

Art. LI. Passengers coming from a zone, which, in the opinion of the local

sanitary authorities, is infected with malaria to such a degree as to constitute a menace, shall be subject to medical inspection.

All persons who have fever at the time of inspection shall be transferred to the hospital or to halls *ad hoc,* or, should they prefer it, shall be allowed to go to their residence where they shall be subject to such inspection as the local authority may deem necessary during the acute stage of the infection.

The Convention recommends to the American nations:

1. That through their respective sanitary authorities, they make a popular educational propaganda by means of pamphlets and instructions concerning the etiology and prophylaxis of malaria.

2. That centers be established for the free distribution of quinine among the poor on prescriptions given by physicians and for the treatment of cases of malaria.

3. That the houses where the patients of malaria have been treated be fumigated after the patients are cured.

Besides, I will suggest the following recommendations in the sense in which they have been made by other delegates:

ADAPTATION OF THE CONVENTION OF WASHINGTON TO EUROPEAN COLONIES IN AMERICA.

Whereas, the Convention of Paris of 1903, in adopting its resolutions, overlooked a very important detail concerning yellow fever, which was corrected by the Convention of Washington;

Whereas, therefore, the European colonies on the American continent are not guided with regard to yellow fever by the same convention as the American Republics;

Whereas some of said colonies frequently become a focus of yellow fever,

Be it resolved, that through the communication which is to be established between our permanent Bureau and that of Paris the plan of sanitary measures against yellow fever which was adopted at the Convention of Washington in 1905 is recommended to the consideration of European nations, either to study them separately at the next Sanitary Convention of European States, or in any other manner that may be agreed upon between the two permanent bureaus.

NATIONALIZATION OF THE SANITARY SERVICES.

Whereas the success met with on this continent in recent years in the campaign against endemic diseases has been due to the intervention of Central Governments;

Whereas on the contrary the lack of means of the legal authorities, as well as the serious obstacles due to dualism in the sanitary authority, has become evident time and again,

The Convention recommends to the American States the nationalization and centralization of the sanitary authorities by means of legislation, and the establishment of a Department of Public Health.

THE CHAIRMAN. These recommendations are referred directly to the Advisory Committee.

I beg the delegates, who are members of the Committee on Malaria, to study their report and to send the same as soon as possible, in order to refer it to the other Committee. What is wanted is that before we adjourn, we may have precise and definite resolutions concerning this subject, because the benefits to be derived from this Convention cannot be appreciated unless they are decided in an entirely practical fashion.

I beg to propose to the Convention that we adjourn the session in order that both the Committee on Malaria and the Advisory Committee may devote their attention to their respective matters, and that

Dr. Wyman be allowed to present a proposition which does not relate to malaria, in the discussion of which we have been engaged.

DR. WYMAN. I beg leave to submit the following resolution:

Resolved, That the Secretary be requested to include in the printed transactions of the Third International Sanitary Convention of the American Republics, a summary of all the formal resolutions adopted successively by the First International Sanitary Convention, the Second and Third Conventions.

In explanation of this I would state that there are a number of very valuable resolutions relating to sanitary matters that should not be lost sight of, and I think it would be advisable to have a review of them in the printed transactions of this session.

I wish also to invite the attention, particularly of the Committee on Trachoma and on Yellow Fever, to the recent treatises on these two subjects which have been published by the Public Health Service of the United States. One is on trachoma, and is a very valuable addition to our knowledge of the subject, and a review of all the latest scientific ideas concerning that disease, and a volume which is of great practical value both in the diagnosis of the disease and particularly useful in the efforts to keep trachoma cases from entering the country from another country. The second is a very valuable practical work on yellow fever, its etiology, symptoms and diagnosis, which was prepared particularly for use by physicians who actually come in contact with these cases of yellow fever and with doubtful cases.

THE CHAIRMAN. The propositions of Dr. Wyman are referred to the Advisory Committee.

In order to bring the session to an end, I beg the delegates to kindly assemble this afternoon at 3 o'clock, sharp, because at 4 o'clock I wish to show them the disinfecting plant and offices of the Superior Board of Health.

The session was adjourned.

Afternoon Session.

Dr. Licéaga, the Chairman, opened the session at 3 o'clock, the following members being present: Drs. Oswaldo Gonçalvez Cruz, Ricardo Gutiérrez Lee, Genaro Payán, Hugo Roberts, Juan Guiteras, Juan Horacio Estévez, Walter Wyman, R. H. von Ezdorf, P. J. Straub, J. Gatewood, Salvador Ortega, José Azurdia, Luis Lazo Arriaga, Rodolfo B. González, Ernesto Fernández Espiro, and the Secretary, Juan J. Ulloa.

The Chairman begged those present to excuse the failure to read the minutes of the morning session at this time, inasmuch as there was not time in which to prepare the same.

THE CHAIRMAN. Gentlemen: I have the honor to introduce to you Dr. Ernesto Fernández Espiro, delegate of the Republic of Uruguay to the Third International Sanitary Convention of Mexico, who has just arrived, and who was unable to attend our sessions before because, having started on his journey on the 26th of October, he was unable to arrive in Mexico until this morning. We are exceedingly pleased to have him with us, though he has been unable to attend our first sessions.

Dr. Ulloa proposed that the name of Dr. Fernandez Espiro, delegate of Uruguay, who has just arrived, be added to the list of Vice-Presidents. This proposition was unanimously approved.

DR. ESPIRO. Mr. Chairman and delegates: On entering upon my duties as a delegate to the Third International Sanitary Convention of the American Republics, I cordially greet the Chairman and other delegates, and would say, at the same time, that I have exceedingly regretted that, owing to unavoidable circumstances I have not been able to arrive in due time in order to have the honor and pleasure of attending the inaugural session of the Convention, but although I have not been able to be with you from the beginning, allow me to hope, at least, that I may, during the remaining days of the session, contribute to the work we propose to do. In the meantime I am very glad to be with you, the distinguished representatives of the American Republics, who bring to the deliberations of this Convention your knowledge and recognized experience.

THE CHAIRMAN. Dr. Ezdorf wishes to make a motion relating to malaria in the discussion of which we were engaged this morning. I beg you to allow him to read his proposition so that it may be referred to the proper Committee.

DR. EZDORF. In order that some of the propositions presented this morning in relation to malaria may become more effective, I wish to present the following resolution:

Resolved, That the Permanent Sanitary Bureau at Washington be instructed to distribute regularly information concerning the existence of malaria in their several important seaboard cities.

THE CHAIRMAN. This resolution is referred to the Committee on Malaria.

DR. ROBERTS. Bearing in mind that the information received at the ports from the local authorities at the places where a ship arrives, are generally delayed because it is necessary to print and distribute them, etc., and it being important that physicians be advised in due time of all the reports and information that may be useful to them concerning public health at the sailing of a vessel, I wish to propose that upon issuing the bill of health to the vessels, there be specified therein, just as other diseases are specified, the greater or smaller number of cases of malaria there are at the moment of the sailing of the vessel, in order that on the arrival of the same the physicians may know all the cases and subject all the patients as well as the vessel to the proper treatment. The following is my motion:

Whereas, the reports received from the Central Bureau of Information generally reach the local authorities with some delay, and it being of the utmost importance for said authorities to know the sanitary conditions prevailing in the clearance ports of a vessel, especially with regard to malaria, the undersigned proposes:

That there be stated as nearly as possible in the bills of health issued to the vessels the mortality caused by malaria.

THE CHAIRMAN. I beg the Convention to allow the motion just made by Dr. Roberts of Cuba to be added to that of Dr. Ezdorf, and that both be referred to the Committee on Malaria.

The subject for discussion at this evening's session is the following: "Discussion of measures of International Sanitary Police against the bubonic plague and cholera proposed by the papers or motions of the delegates."

Does any one present desire to make any remarks? If not, I will read some pages of this pamphlet during the fifteen minutes I have at my disposal.

At last Monday's session, as a summary, I had the honor to point out the principal features contained in this pamphlet, but I intend to do so now in a somewhat more detailed manner in order to find out what practical resolutions may be obtained from this Convention.

(The report was read, and ordered to be inserted in the Appendix, page 184.)

I wish to add a few words: What we did in the case of the bubonic plague, as well as in the case of yellow fever, was not precisely to construct hospitals, nor lazarettos, nor great establishments. Inasmuch as what we needed was a sanitary station like the one I have just described, what was done at Villa Union was to select a place (which happened to be a tannery), and we made partitions, the place was properly disinfected, and the sanitary station was established. Now, as to yellow fever, whenever we wish to establish a lazarette at any place, we select a house having three rooms, order it whitewashed, put in floors, screened doors and windows, and the lazarette is completed, the first room being used by the watchman, the second by the patients, and the third as a kitchen.

Besides, there are hospitals provided with wire frames 5 meters wide and 3½ meters high, with double wire doors—all made so that they can be transported on mule back, the whole structure being covered with canvas and provided with wire windows. In good weather the canvas curtain is raised, and by means of them, halls are formed around the house. The cots and chairs are carried folded, and the hospital can be installed in five hours. If you have an opportunity I advise you to employ this method.

Dr. Gonçalvez Cruz. To demonstrate the value of vaccination in the prophylaxis of the epidemic, reference is made to the fact of having completely controlled, by means of vaccination with the Manguinhos vaccine, an epidemic that started in the small village of Areia Branca in northern Brazil. All the inhabitants were vaccinated, and the epidemic ceased.

Another instance is that members of the family who accompanied the patients to the hospital, and who were admitted to the hospital after being vaccinated. There were some persons who could not be vaccinated, and contagious cases developed among them, while those who were vaccinated did not become infected.

Dr. Fernández Espiro. Mr. Chairman and delegates: I am very glad that the reading of the interesting work of Dr. Licéaga affords me the opportunity of making some brief remarks concerning the bubonic plague in Montevideo, and I do not say in Uruguay, because Montevideo was the only city where this disease appeared.

Until 1901 said disease was entirely unknown to us, notwithstanding the fact that we were in frequent communication with countries where

the disease had appeared years before. In the year mentioned, the first case appeared under peculiar circumstances.

This happened in one of the customs warehouses, it not having been known whether the case was preceded by the death of rats. I was at that time Chairman of the National Board of Health, and was timely advised of the fact by a colleague. I went to the place immediately and notified the Director of the Experimental Institute of Hygiene to accompany me, and we did actually satisfy ourselves that in said warehouse there had been dead rats, and some of them stunned. Some of them were gathered up; a bacteriological diagnosis was made, and after 24 hours, it was confirmed that it was a case of rats afflicted with the plague. I had already prepared a list of the employees of that place, and on the following day I learned that the foreman of said warehouse was sick at his domicile; I went there accompanied by another colleague, and with some difficulty made the diagnosis, because the character of the plague was quite irregular, since the disease was accompanied by pharyngitis, though it did not show any ganglionic infarct neither in the groins nor in the armpits. After two or three days I noticed that one of the retromaxillar ganglions was infarcted, and we at once removed and isolated the patient; a puncture was made, the necessary blood extracted, and it was proved that it was a case of bubonic plague. Afterwards the necessary cultures or inoculations were made. The rats were killed, the house of the patient was disinfected, and the plague apparently disappeared in Montevideo.

More than six months thereafter I was notified that in a bakery near the port there were persons afflicted with this same disease. I made the necessary investigation, and secured some very interesting information which will be a surprise to the delegates.

Said cases were imported from the port of Asunción, Paraguay, in the following manner: From that bakery bags of crackers and bread were obtained for supplying such vessels as went to Matto Grosso, and the bags were retained in said store to be delivered again to the steamer which made the return trip. Said bags had been kept in the bakery where cases of bubonic plague had appeared, and upon their return, the persons who handled them were stricken with said disease.

Therefore, it was shown that the bubonic plague was imported. At that time there were three or four more cases, and then the disease entirely disappeared.

But at the beginning of the next year, 1902, we had a new importation of the plague, which occurred in another customs warehouse under the following circumstances: This importation was also made by persons who used to handle bags which had been filled with coffee from Rio de Janeiro, and the four persons who transferred the coffee from one bag to another were stricken with the disease.

The new cases resulting from this third importation could not be traced, and therefore, it was not possible to know the place whence they came, nor was it possible to find out whether there had been epizootic among rats. The facts are that the disease has appeared in those places where bags filled with cereals, such as wheat or corn, coming from other countries, frequently arrive. In short, the total number of cases occurring in the port of Montevideo from 1901 to

April, 1907, was 47. So that the bubonic plague has followed a course entirely different from that followed in other countries.

The measures which have been put in practice in Montevideo are more or less those indicated by Dr. Licéaga. The patient was isolated, either at home or in an isolated house, according to the special circumstances of the case; the disinfection of the houses was made, the rats were exterminated, and magnificent results were obtained.

As we have not had a real epidemic of the bubonic plague, our measures of an international character have been modified. During some years we have been practising the sanitary inspection of vessels coming from infected or suspicious ports, but we have realized that such measures were extremely exaggerated, and when we held our Convention of 1904, we only prescribed that the patient of bubonic plague should be isolated; that first and second class passengers may land, provided they are watched for five days on land, and that the isolation of the third class or steerage passengers be made at such place as the sanitary authorities may direct.

We have adopted these measures because we have come to the conclusion that during the long period of time to which I have referred, none of the vessels coming from Rio de Janeiro, where said plague has prevailed, sometimes in quite an aggravated form, in none of said vessels occurred any case of the bubonic plague. Therefore, since that time, we have given great importance—a capital importance—to the transmission of the disease by means of rats.

This is the reason why we have not in any way detained the healthy passengers, nor the freight of the steamers, because we thought there was no reason to do so in the case of this disease. Our action is directed exclusively to those patients who, as I said before, are isolated in the department which each of the signatory countries of the Convention had at its disposal.

THE CHAIRMAN. If there are no other remarks on this subject, the session is suspended to be reopened after the visit to the Superior Board of Health, where I wish you to accompany me.

Before closing the session, I would state that Dr. Fernando Espiro requests to be allowed to read his report in the session of tomorrow.

The Secretary will now read some communications which have been received.

THE SECRETARY (reading):

AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS.

Office of the Secretary of the Council, No. 39 Broadway.

New York, November 26, 1907.

To the President and Secretary of the International Sanitary Congress, to be held in December, 1907, in the City of Mexico.

GENTLEMEN: The following gentlemen were this day named as Delegates to your Congress by the Council of the American International Congress on Tuberculosis, in whose action this body takes a deep interest.

Hon. Porfirio Díaz, President of the Republic of Mexico.

Hon. Señor Ignacio Mariscal, Minister of Foreign Relations of Mexico, City of Mexico.

Hon. Teodoro A. Dehesa, Governor of Vera Cruz.

Hon. Miguel Cárdenas, Governor of Coahuila.

Hon. Pedro L. Rodríguez, Governor of Hidalgo.

Hon. Emilio Pimentel, Governor of Oaxaca.

Hon. Aristeo Mercado, Governor of Michoacan.
Col. Francis T. B. Fest, M. D., Las Vegas, New Mexico.
Dr. Juan J. Ulloa, Secretary of the American International Congress on Tuberculosis, Consul General for the Republic of Costa Rica, City of New York.

Faithfully yours,

CLARK BELL,
Secretary of the Council for the Congress.

MEDICO-LEGAL SOCIETY.

Office of the President, No. 39 Broadway,

New York, November 26, 1907.

To the President and Secretary of the International Sanitary Congress, to be held in December, 1907, in the City of Mexico.

GENTLEMEN: The following gentlemen were this day named as Delegates to your Congress by the Executive Committee of the Medico-Legal Society, in whose action this body takes a deep interest.

Col. Francis T. B. Fest, M. D., Las Vegas, New Mexico.
Dr. Juan J. Ulloa, Secretary of the American International Congress on Tuberculosis, Consul General for the Republic of Costa Rica, City of New York.

Faithfully yours,

CLARK BELL,
President of the Medico-Legal Society.

THE CHAIRMAN. Gentlemen: I beg to submit to the Assembly a decision in connection with these communications.

The organization of the Sanitary Convention is different from private congresses or associations devoted to any scientific subject. I understand that no person is admissible in our body who is sent as a delegate by said corporations, and much less when said persons, though prominent officials, are not professionals, because, as it appears, the only professional among them is Dr. Ulloa. Besides, the appointment of delegates to this Convention has been made by the respective Governments. This is my opinion concerning the matter, and is what I want to consult with this body, and I think that we should answer politely thanking them, stating at the same time that it is not possible for us to accept the representation of the persons designated. We cannot accept such delegates of a society, however important it may be, and however prominent the persons designated.

DR. FERNÁNDEZ ESPIRO. I understand, as Dr. Licéaga has clearly stated, that the organization of the Sanitary Convention of the American Republics is entirely different from the organization of the Congresses which are held periodically in other countries; so much so that when invitations are received to attend these Congresses, such invitations are sent to the respective Governments, stating therein the desire that they send their delegates, and in such cases the invitations are sent through the Minister of Foreign Relations of the country extending the invitation to the Department of Foreign Relations of the countries invited, and, therefore, the Governments appoint the delegates; while, in the present case, I understand that it would be a private delegation which would be accredited before this Convention, and, therefore, the acceptance of a thing we are not authorized to accept, would imply the establishment of an improper precedent, because the Governments should make the invitation. Consequently, I second the motion of Dr. Licéaga.

The motion of Dr. Licéaga was unanimously adopted.

The session adjourned.

FOURTH DAY, THURSDAY, DECEMBER 5.

Night Session.

The meeting was called to order by the Chairman, Dr. Licéaga, the following delegates being present: Drs. Oswaldo Gonçalvez Cruz, Ricardo Gutiérrez Lee, Genaro Payán, Hugo Roberts, Pedro L. Ferrer, Juan Horacio Estévez, R. H. von Ezdorf, H. L. E. Johnson, Salvador Ortega, José Azurdia, Luis Lazo Arriaga, Ingeniero Hilario Elguero, Rodolfo B. González, Ernesto Fernández Espiro, and Juan J. Ulloa, Secretary.

The Secretary read the minutes of the sessions held on the 4th instant.

THE CHAIRMAN. The minutes are open to discussion. If there are no objections they are approved as read.

We began yesterday the discussion relating to international sanitary police measures against the bubonic plague and the cholera, proposed in the reports of the delegates, or on their special motions. As you will recollect, we are also discussing the bubonic plague, and I should like to know if anyone desires to say anything on this subject, and if there are no remarks to be made, I would ask if there is anyone who desires to make any remarks concerning cholera.

As there is no one who wishes to make any remarks on this subject, Dr. Fernández Espiro, delegate of Uruguay, has the floor for the purpose of reading his essay.

DR. FERNÁNDEZ ESPIRO. Before reading the paper which I will submit to this Convention, I beg the Chairman to inform His Excellency, the President of the Republic, of the contents of the following cablegram, without prejudice to my referring to it when I have the honor to meet him personally.

Montevideo, December 4, 1907.

DR. ESPIRO, Mexico.

Council greets President Mexican Republic and members Convention, and predicts success.

VIDAL-CROVETTO.

THE CHAIRMAN. In compliance with the request just made by the delegate of Uruguay, I shall deliver to the President of the Republic, the cablegram just read, and I hope the Convention will approve the greeting of the President of Uruguay. The Convention highly appreciates the sentiments expressed by the President of the Superior Board of Health of Uruguay, and thanks him for it.

The delegate of Uruguay then read his report, which appears in full in the Appendix, page 219.

THE CHAIRMAN. Gentlemen: Before opening the discussion referred to in the program which has been accepted by the Convention, I would request the members of the same to consider the place where the sessions of the next Convention should be held. The decision concerning this subject appears in the program for Saturday, that is to

say, for the 7th instant, but I would like the delegates to consider this matter beforehand in order that, should there be any discussion, they may be well prepared for it, because there are many matters to be discussed in Saturday's morning session.

Inasmuch as nobody has made any remarks, either concerning the measures taken on the bubonic plague nor on cholera, which were proposed by the delegates, we will proceed, as agreed upon, to the subject to be discussed tonight, namely, "Discussion on the Measures to Protect against Trachoma, Beri-beri, and other chronic transmissible diseases."

DR. FERNÁNDEZ ESPIRO. I should like at least to know the views of the delegates concerning the measures relating to the bubonic plague and Asiatic cholera, because I think the Convention should make some decision on this point.

THE CHAIRMAN. Before the delegates express their opinion on the subject, I beg to inform them that the motion just made is included in the resolutions adopted by the Conference of Rio de Janeiro, and, besides, it is also included in our program.

The following are the resolutions adopted by the Third International Conference of American States held at Rio de Janeiro in August, 1906, which, among other measures, point out certain subjects which the Sanitary Convention, to be held in the City of México, shall take into consideration:

RESOLUTIONS ADOPTED AT RIO DE JANEIRO IN AUGUST, 1906.

The Third International American Conference recognizes the utility of the principles of international sanitary police which inspired the last convention celebrated in Rio de Janeiro, applicable to a definite region and the convention signed in Washington on the 14th of October, 1905, which is applicable to all the nations of America, and, in virtue of this, recommends to the countries here represented:

1. That as a general rule they adopt the said International Sanitary Convention of Washington, adhering to it and putting its precepts into practice.

2. The adoption of measures tending to obtain the sanitation of the cities, and especially of the ports, and to attain as far as possible to a better knowledge and a greater observance of hygienic and sanitary principles.

3. The advisability that all American nations attend the next International Sanitary Convention to be celebrated in the City of Mexico in December, 1907, and that they instruct their respective delegates to study and solve the following points:

(a) Practical means of rendering effective the second of the present recommendations.

(b) Establishment and regulation in each of the American countries of a committee composed of three medical or sanitary authorities to constitute, under the direction of the International Sanitary Bureau, established at Washington, an international sanitary informing committee of the American Republics, contributions to meet and to communicate between themselves data referring to public health and for any other purpose that the Convention may think proper.

(c) Establishment and regulation in some place in South America designated by the Convention of a center of sanitary information that shall supply to the already existing International Sanitary Bureau the elements necessary to carry out the recommendations 5, 6 and 7 on sanitary police made by the second International American Conference.

(d) Establishment of relations between the International Bureau established at Washington and the Bureau Sanitaire International of Paris, in order to obtain the best information in sanitary matters and take resolutions tending to the object entrusted to both Bureaus.

4. In accordance with the provisions of the Article 3, paragraph c, the city of Montevideo is hereby designated as the seat of the center of sanitary information.

I am going to take the liberty of reading other declarations of the former Convention. It was said in the first Convention that undoubtedly the work of the Convention was based on the resolutions of the International American Conference held in this city from the latter part of 1901 to January, 1902. Those resolutions are as follows:

First. That all measures relating to the subjects of international quarantine, the prevention of the introduction of contagious diseases into a country, and the establishment and control of maritime and of international land detention, or health stations, shall be wholly within the control of the National Governments.

Second. That there shall be established in the ports of each country two kinds of detention (a) that for inspection or observation, and (b) that for disinfection.

Third. That prohibitive quarantine on manufacturers and merchandise shall be abolished and that merchandise proceeding from non-infected ports or places, and which passes through infected territory without being detained therein beyond the necessary time of transit, shall not be subject to detention or other sanitary measures beyond that of the inspection which may be considered necessary at its destination, and that such inspection and delay shall not exceed the time absolutely necessary therefor. Further, that this same regulation shall apply equally to international communication by railway, provided that live stock, hides, rags, and immigrants' effects be excepted from the above provisions.

Fourth. That the Governments represented in this Conference shall co-operate with each other, and lend every possible aid to the municipal, provincial and local authorities, within their respective limits, toward securing and maintaining efficient and modern sanitary conditions in all their respective ports and territories, to the end that quarantine restrictions may be reduced to a minimum, and finally abolished. Further, that each and all of their respective health organizations shall be instructed to notify promptly the diplomatic or consular representatives of the Republics represented in this Conference, stationed within their respective territories, of the existence or progress within their several respective territories, of any of the following diseases: Cholera, yellow fever, bubonic plague, smallpox, and of any other serious pestilential outbreak. And that it shall be made the duty of the sanitary authorities in each port, prior to the sailing of a vessel, to note on the vessel's bill of health the transmissible diseases which may exist in such port at that time.

Fifth. The Second International Conference of the American States further recommends, in the interest of the mutual benefit that would be derived therefrom by each of the American Republics, and that they may more readily and effectively co-operate one with the other in all matters appertaining to the subjects mentioned in the above resolutions, that a general convention of representatives of the health organizations of the different American Republics shall be called by the governing board of the International Union of American Republics to meet at Washington, D. C., within one year from the date of the adoption of these resolutions by this Conference; that each Government represented in this Conference shall designate one or more delegates to attend such convention; that authority shall be conferred by each Government upon its delegates to enable them to join delegates from the other Republics in the conclusion of such sanitary agreements and regulations as in the judgment of said convention may be in the best interests of all the Republics represented therein; that voting in said convention shall be by Republics, each Republic represented therein to have one vote; that said convention shall provide for the holding of subsequent sanitary conventions at such regular times and at such places as may be deemed best by the convention; and that it shall designate a permanent executive board of not less than five members, who shall hold office until the next subsequent convention, at which time the board shall be appointed with a chairman to be elected by ballot by the convention; the said executive board to be known as the "International Sanitary Bureau," with permanent headquarters at Washington, D. C.

Sixth. That in order that the International Sanitary Bureau thus provided for may render effective service to the different Republics represented in the

convention, the said Republics shall promptly and regularly transmit to said Bureau all data of every character relative to the sanitary condition of their respective ports and territories and furnish said Bureau every opportunity and aid for a thorough and careful study and investigation of any outbreaks of pestilential diseases which may occur within the territory of any of the said Republics, to the end that said Bureau may by those means be enabled to lend its best aid and experience toward the widest possible protection of the public health of each of the said Republics, and that commerce between said Republics may be facilitated.

Seventh. That the salaries and expenses of the delegates to the convention and of the members of the International Sanitary Bureau herein referred to and recommended, shall be paid by their respective Governments, but that the office expenses of special investigations it may make, together with those for the translation, publication and distribution of reports, shall be paid from a special fund to be created by annual appropriations by the Republics represented in such conventions, on the same basis now in force between the American Republics for the maintenance of the Bureau of American Republics. Further, that in the interest of economy, the said Bureau of American Republics shall be utilized by the conventions herein referred to, and by the International Sanitary Bureau herein recommended to the fullest extent possible, for the correspondence, accounting, disbursing, and preservation of the records incident to the work comprised within these resolutions.

Now should each Congress pretend to modify fundamentally the above resolutions, we could never agree, while if we take that basis as a fixed one, the way will be easy.

I said before that that resolution of the Rio Conference answers the questions just made by Dr. Fernández Espiro, who maintains that it is necessary to decide this point. Said resolutions have already been adopted at the Sanitary Convention of Washington, which was signed on October 14, 1905. The Convention refers precisely to these three points:—the bubonic plague, cholera, and yellow fever, and all these resolutions were taken and adopted ad referendum, and have been approved by nine American Republics because they contain all the data that sanitary science has been able to gather on these subjects up to the present time.

As we have already stated, the Washington Convention represents an improvement on the Paris Convention, and the latter is nothing but an improvement on what was done before, in 1903, at that capital. The Convention of Paris did nothing but to improve that of Dresden, as the latter did nothing but to improve that of Vienna, and the latter that of Rome. Therefore, in an inverse order, that of Rome was improved by that of Vienna, the latter by that of Dresden, which was improved by that of Paris, and finally this latter was improved by the second of Paris. The Convention of Washington is based entirely on the Second of Paris. Yellow fever is unknown in Europe, but such is not the case in the European colonies in America.

Let us now see to what extent that Convention interests us. The importance of the Paris Convention of 1903 consists in the fact that it represents the work of the most prominent men, not only in sanitary science, but also in matters referring to commerce and its relations, that is to say, of the most experienced diplomats in sanitary science, and the question they proposed to solve was the following: To guard our ports and our different nations from exotic diseases in such manner as not to interfere with the present modus vivendi of society, which at present comprises river navigation as well as maritime navigation, and railroad communication, so that each of these conventions

has brought together a number of scientists who have discussed the matter to the greatest possible extent. Of course, we can not say that our countries have the number and importance of the means of communication which European countries have, and that, in an exceedingly small territory, said nations—with a great network of railroads, and with a large number of ships on the Atlantic and Pacific oceans—have shown themselves to be very rich, and at the same time to have an enormous commerce.

Therefore, those interested in commerce and navigation have borne in mind the great importance of sanitation; and if now at a Congress which will last only two days more, we should undertake to study this question anew, no matter how much learning we might show on the subject, and however in earnest we might be about it, it would be impossible, absolutely impossible, to reach more precise, accurate, scientific and humane conclusions than those set forth at the conventions of Paris and Washington. If, therefore, we possess a code already made, could we do anything better than adhere to it?

Unfortunately for us, Dr. Fernandez Espiro was not present at the first session, in which we earnestly tried to demonstrate the advisability of all the nations of the earth having only one common law which should govern all of them, and since this law is already made, and has been deeply studied and improved in five international European conferences, as well as in that of Washington, said law is our law. Having a code in which all these questions have been exhaustively studied, what better resolution could this convention adopt, than to have all its members here present, who are fully empowered to sign ad referendum, adhere to it?

I anticipate the remarks that Dr. Fernandez Espiro might make concerning the Convention held in his country, and would answer him that it would be impossible to accept it, for the reason that that Convention can only have a local application, and can not be applied to all countries, as was stated by the Rio de Janeiro Conference, and is only to be taken into consideration with regard to the countries that have intimate relations with each other, but the Convention of Washington is very desirable for the whole Continent.

I beg the delegates to take into consideration the fact that any resolution they may adopt, considering the short time at our disposal, could not by any means solve the question. Therefore, what better, more important and far reaching thing could we do in behalf of our respective countries than to adopt the best code in existence? I do not hesitate to say that I consider this the work of many generations of diplomats, of many physicians and scientists, and, consequently, this seems to be the latest expression on sanitary science, and I would once more beg the delegates who have not yet accepted it, to adopt it.

Gentlemen, in the name of humanity, let us accept this code. (Applause.)

Dr. Ferrer. I wish to say a few words in answer to my colleague from Uruguay. At the first and second sessions, the delegation of Chile presented detailed reports concerning the bubonic plague and the course of the epidemic, as well as what has been done in our country in regard to this matter. Said delegation did not present definite conclusions, for the same reasons which have just been set forth by

the Honorable Chairman, and therefore it only stated the course of the epidemic, and indicated all that has been done in Chile, where the resolutions of the Convention of Washington are strictly observed, although this Convention has not yet been approved because the proceedings incidental thereto are rather slow, but the President has already approved them, he himself having so stated, even though Congress has taken no definite action in the matter.

MR. CHAIRMAN. On our trip from Washington to this city, we had the pleasure to read a cablegram sent by the Chilean Government to our Minister in said capital, saying that the President had sent a message to Congress requesting the prompt approval of this Convention.

DR. FERNÁNDEZ ESPIRO. When I made my remarks, I did not intend to provoke a discussion on the subject, and I spoke because I thought something ought to be said concerning the prophylaxis of those diseases, since these points are included in the program, and the Chairman a moment ago declared that if nobody had anything to say concerning the measures that should be adopted against the bubonic plague and cholera, the discussion would be continued.

I am perfectly aware of the evolution of all the sanitary conventions quoted by the Chairman down to the last Convention of Paris, but I am not convinced, as our colleagues seem to be, that the convention of 1903 has stated the latest expression in the matter of international prophylaxis, and so convinced am I of this fact, Mr. Chairman, that I entertain the hope that when the sanitary convention of Paris comes to be revised, or when a new convention is held, the provisions relating to the international prophylaxis of yellow fever, cholera and the bubonic plague will be entirely modified, and from said conventions will be omitted a thing that is at present done, namely, the sanitary inspection of passengers. I hope, Mr. Chairman, that what we have done in our Sanitary Convention of 1904 may be adopted by subsequent conventions, and that the measures of international prophylaxis will be limited to the detention and isolation of sick passengers, and to the inspection on land of all passengers who are not afflicted with any of these diseases—that is to say, that this inspection will be substituted by what used to be done before in the lazarettos and by what has been done afterwards on board the vessels. In short, that the words "Sanitary Inspection" shall be omitted in said convention, words which have been kept in force in the case of vessels infected with the plague, and also in a practical manner in the case of vessels having on board cholera or yellow fever patients. For this reason, I do not share the opinion that the Sanitary Convention of Paris, notwithstanding the fact that prominent sanitary experts participated in it, contains the latest expression concerning the international prophylaxis of these diseases, nor do I believe that it represents the opinion of those who did not take part in said international convention, but who, nevertheless, have devoted many years of their life to the study of these diseases and of the most efficient means of combatting them. Finally, in order not to tire my colleagues, I would say that I am convinced that in future the sanitary treatment imposed on vessels having on board patients of this kind, will be radically modified, and that the only prophylaxis, and the most humane, that is to say, the most advisable for the commercial interchange among nations, as well as for the purpose of international

relations, should be the inspection of passengers on land, and the isolation of the patients in lazarettos, or other suitable places, omitting any other sanitary measures concerning merchandise of whatever kind.

THE CHAIRMAN. I am very glad to have heard the reply of Dr. Fernandez Espiro, but I must correct what I said, and I do so with the greatest pleasure. I should not have said, the latest expression of science, but the latest accepted legislation. This is the proper expression.

I beg now to express my personal views on the matter, and it seems to me that we have been of the same opinion. In the session of day before yesterday, I said that it was necessary to omit the inspection, which shows that that is my personal conviction, and I shall so maintain continually; but, gentlemen, we have not yet reached that stage. If we had time enough to study, I would certainly adhere, without any restriction whatever, to what Dr. Fernandez Espiro has just said, but we have only two days at our disposal in which to do our work. Now, can we make any modifications in two days?

DR. FERNÁNDEZ ESPIRO. Mr. Chairman, I have not advocated any modification whatever, and simply desired to make known my opinion on the subject.

THE CHAIRMAN. I take advantage of this opportunity to repeat that I should not say the latest expression of science, but the last agreement, and this is the point upon which I shall insist.

My opinion is that sanitary laws are behind the times, but if we can not make any modification at this moment, which of these two ways is the most acceptable? To accept something that is not the best, but which has already been accepted by 27 nations, or to introduce sanitary modifications in two days, which is the only time we have at our disposal, which of the two ways is the most practical?

Fortunately we have already entered an epoch in which idealism has to submit to reality, however terrible the latter may be, and we are compelled to accept the current coin, that is to say, the Convention of Paris, which has been accepted by 27 countries, and we hope that the new conventions may improve, and they will surely improve, the sanitary laws.

Let us accept said convention for the present—the time will come when it can be modified—because it is better to accept these international sanitary laws, however deficient they may be, than to have none.

I beg to make a formal motion: That one of the resolutions to be voted upon at the session to be held on Saturday morning, be in the following terms:

> That the delegates of the nations here assembled adhere to the Convention of Washington of 1905, and that those countries which have already adhered to it, but whose adhesion has not been ratified by their respective Governments, propose the ratification thereof.

I request the Third International Convention to accept this resolution. I also request that this proposition, like the former ones, be referred to the Advisory Committee.

Let us now continue to consider the matter we were discussing, and which refers to the measures that should be taken to protect ourselves against trachoma, beri-beri, and other transmissible chronic diseases.

In order to encourage the discussion on this point, I will read the following:

The easy intercourse among men, either by land or by sea, has brought about two great benefits to mankind; but since there is no advantage without some disadvantage the facilities which steamers and railroads afford for transportation have also their disadvantages.

Men in traveling carry with them the diseases from which they suffer. The International Sanitary Police has earnestly tried, even to exaggeration, to prevent quickly developed transmissible diseases from being brought into ports, or border cities, or more accurately speaking, to render very difficult the transmission of these diseases, keeping the patients of said diseases or those who are suspected of being stricken with them on the vessels on which they come, or in special lazarettos, but with regard to transmissible chronic diseases, legislators have not until now given any attention to them, and yet it is just as necessary to take precautionary measures against transmissible diseases that quickly develop as it is of those which develop slowly, and are called chronic.

Now that Asiatic immigration encounters such great difficulties in entering the United States of North America, it has been directed toward Latin-America. Through the port of Salina Cruz there arrives in Mexico every month one or two steamers bringing Chinese immigrants and some of them Japanese.

Our sanitary code prescribes that there shall only be allowed to enter the Republic such persons as desire to be transported to it as immigrants, when they have a certificate of health showing them to be in a perfectly healthy condition, issued by the proper authority of the place whence they come, and countersigned by the Mexican Consul. In accordance with the same code, the certificates issued two months prior to the date of arrival of the immigrants to our country are void. (Article 49 of the Sanitary Code.)

But this measure was insufficient because the immigrants might have left their country having the diseases in incubation and arrive at our ports after the latter have developed. Attention should be called to the fact that our situation favors the transmission of diseases, because the vessels do not touch at any port, but come directly from the Orient to our Pacific ports. In view of the above, rules have been issued referring to Asiatic immigration, a brief outline of which is as follows:

Immigrants shall come provided with a certificate of health issued by a physician at the place of departure, and countersigned by the Mexican Consul in such place, and in the absence of the latter, by the Consul of the United States of North America.

Immigrants will only be admitted through the port of Salina Cruz when their number exceeds ten, but when in smaller numbers they are allowed to land at the ports of Acapulco, Mazatlan, Guayamas, Tampico, Veracruz, or Coatzacoalcos.

All vessels with immigrants on board are received in accordance with the provisions of the Sanitary Code, the Maritime Sanitary Regulations, and such special rules as may be issued by the Superior Board of Health in each case, as circumstances may require.

If no special circumstances exist, the healthy immigrants are allowed to land without delay, and are taken directly through a special wharf to the lazaretto reserved for them. There they are compelled to bathe, their clothes and baggage are disinfected, and subject to an inspection for ten days.

If at the end of this period no disease develops among them, they are allowed to leave, the health delegate duly notifying the Superior Board of Health concerning the place of destination of each of the immigrants.

Heretofore the foregoing measures have been sufficient to guard us against cholera, bubonic plague and yellow fever, but they were not able to prevent some patients of beriberi from entering the country.

Inasmuch as this disease was entirely unknown in Mexico, and since, on the other hand, the patients had it only in an undeveloped stage in which it was not easy to detect it by the symptoms, which make it easily detected when it is in an advanced stage, there were several cases in Salina Cruz, Tehuantepec and Santa Lucretia, but only among the immigrants themselves. As soon as the sanitary authorities discovered these cases, they demanded that the patients should be re-embarked for their country, and that no person afflicted with beriberi should be allowed to land.

The disease called trachoma was known in Mexico only by occulists, and it must

have been so rare that physicians generally did not know of it, and much less the people.

Dr. Lorenzo Chavez, a distinguished occulist, had occasion last year to note a small epidemic of trachoma in a government school, and called attention to the danger of the same being spread. This fact caused the sanitary authorities to think of the possibility of the Asiatic immigrants bringing trachoma and of the danger of their spreading said disease throughout the country; and as the delegates of the Board of Health at the ports were advised of said danger, they have commenced to enumerate the number of trachoma patients arriving in the Republic, a greater number arriving at Pacific than at Gulf ports. In one of these steamers there were 220 trachoma patients. Then the Superior Board of Health requested the Secretary of the Interior to prohibit the landing of such immigrants, and they were actually re-embarked for China, and thus the Departmental declaration that such patients would not be allowed to land in any of the Gulf or Pacific ports was obtained.

In order to prevent the introduction of the aforesaid diseases, the immigrants are thoroughly inspected before they embark at the port of Hong Kong, whence Chinese immigrants generally come. To this end a physician representing the Superior Board of Health was sent to said port, and he prevents immigrants afflicted with the bubonic plague, cholera, and other transmissible and quickly developed diseases from embarking there.

A law is now under consideration to prevent patients afflicted with tuberculosis, leprosy, scrofula, malaria (with visible symptoms), beriberi, cerebro-spinal meningitis, trachoma, and other transmissible chronic diseases from landing in our ports.

Said law will likewise prohibit the landing of the insane, the aged, idiotic children, persons whose constitution has been greatly weakened owing to any previous disease or to rickets, the lame, the one armed, the humpbacked or crippled in any other way, who are unable to work, and all those who might become a burden to the State.

We hope that if Congress enacts said law, which, as already stated, is under consideration, we shall not only be freed from some diseases unknown to us, but by not allowing them to be introduced in our territory, we shall guard our neighboring countries against them.

I invite you, gentlemen, to suggest to your respective governments the advisability of taking similar precautionary measures to those we have already adopted, or rather to those which will soon constitute a part of our sanitary legislation.

If all the people of America would form a true league in order to prevent the entrance of sick immigrants, or those unable to work, in the vast extent of our continent, we would contribute in a very efficient manner to improve both the social and sanitary conditions of our respective countries.

I desire to add a word to what I have read. Immigrants are not like other passengers. I request very severe laws for immigrants, but not for passengers.

Dr. Roberts. As I had the honor to state when I read my report concerning Cuba, and which I submitted to you, the entrance of immigrants afflicted with trachoma should be prohibited. Trachoma is not imported into Cuba from Asia by Chinamen, because the entrance of Chinese subjects in Cuban territory is absolutely prohibited, and therefore, this disease can not be brought in by the Chinese. On the other hand, many European immigrants brought the disease to Cuba.

The quarantine service of Cuba has physicians at the Spanish ports whose duty it is to examine persons afflicted with trachoma, and thus prevent their entrance to Cuba, and it is also their duty to vaccinate them, and thus comply with that requisite of the laws of the country, and prevent smallpox on board the ships, a disease which often occurs on vessels arriving in Cuba.

Now, the mission of the physicians of the quarantine service in Spanish ports, which send us a great current of immigration is, for many

reasons, very difficult to carry out. In the first place, at the Spanish ports whence these immigrants come, young men embark who are unwilling to render military service in their country, and illegally obtain permits to embark, and as they have not been examined by any authority or physicians, nor identified by anyone, some of them who are not vaccinated may be afflicted with trachoma; but in the Cuban ports the sanitary service endeavors to ratify the examinations made by the physicians residing in Europe and attached to the consulates, and they ratify also the diagnosis or observation they have made.

When the health officers visit a vessel, the physicians of the port immediately proceed to vaccinate persons who have not been recently vaccinated, and while carrying out this operation, they examine the eyes of the immigrants, and if they detect in any of them an abnormal condition of the conjunctivas, they make a brief report without further examination, and address a communication to the special commissioner, who causes the immigrant to be thoroughly examined by a special commission of occulists whose diagnosis is considered final.

If from this examination it should appear that the patient is afflicted with trachoma, he is re-embarked for the port of origin, but if he happens to be a Cuban, he will be allowed to land.

As to leprosy, I would state that it is one of the diseases subject to quarantine in Cuba. A leprous person is re-embarked for the place of origin, and care is taken to disinfect in the most thorough manner the place occupied by him.

Immigrants afflicted with tuberculosis, if they are unable to work and are liable to become a burden to the State, that is to say, if they are in an advanced stage of the disease, they are re-embarked for the countries of origin.

Persons afflicted with malaria or beri-beri are admitted, but are sent to hospitals for contagious diseases until they are cured.

Dr. Ferrer. Mr. Chairman, the first case of trachoma in Chile occurred in 1902, and the case was discovered by Dr. Máximo Cienfuegos, professor of ophthalmologic clinic, and since then, according to the detailed statistics of that same clinic, of 1,000 children afflicted with conjunctivitis, there were only 14 cases of trachoma, and therefore, such statistics are rather vague, but in spite of this fact, the necessary precautionary measures have been taken.

There are physicians at Santiago, Chile, who carefully examine children.

With regard to immigration, rules and regulations have been issued, which are now in force, and, besides, physicians have been sent to Europe, attached to the consulates, whose duties are to examine all passengers coming to our port, and, consequently, every immigrant coming to Chile is examined by immigrant physicians.

Such immigrants are examined again in Chile, and therefore, by means of this system, I think we have the guarantee that trachoma will not develop among us, and I should add that the only cases that have occurred were among the Turkish or Arabian immigrants.

Beri-beri is unknown in Chile. Two or three years ago a vessel arrived in Chile from the Fridge Islands, and the whole crew was ill with beri-beri, and all of them died, except a cook and his assistant, who were compelled to run the vessel aground on the Chilian coast.

I take advantage of this opportunity to inform the delegates of a fact worth knowing.

In the steamer that brought me from Valparaiso to Panama, a person afflicted with leprosy came on board at one of the ports at which the steamer touched, to the displeasure of all the passengers, and went into the dining room. He landed in a port of the same Republic, and no precautionary measures were taken against him. When he landed. I inquired whether the bedclothes used by said person had been disinfected, or whether any disinfection had been made, and learned that absolutely nothing had been done. I call attention to this serious case. because it should be borne in mind by the nations who had accepted the Convention of Washington.

THE CHAIRMAN. If no one wishes to make any further remarks, I beg to suggest the following resolution to the Convention:

It should be recommended to the Governments represented at this Convention to enact a law prohibiting the immigration of persons afflicted with trachoma or beriberi to each of the respective countries.

DR. ROBERTS. By preventing the emigration of persons afflicted with trachoma from one country to another, we actually prevent the introduction of trachoma into any nation, and as we are here assembled for a common purpose—for a Pan-American purpose—it seems to me that we should, at the same time, devise means for diminishing the number of persons afflicted with trachoma, and to this end it would be very desirable to submit such patients to a special inspection by the local authorities, in order not only to diminish the number of said patients, but also to avoid the transmission of the disease to the other inhabitants of the town.

THE CHAIRMAN. Does any of the delegates wish to make any remarks on the subject? (No one desired to make any further remarks on the subject.)

In accordance with the resolution adopted at the first session, it was agreed that if one of the subjects to be discussed at a certain session should become exhausted, we should proceed to discuss the next topic in the following session, and, therefore, I open to discussion the subject corresponding to Friday's session, namely, "Discussion on the Measures to Prevent the Transmission of Tuberculosis on Board of Vessels and in Railroad Cars." We may say that the subject of tuberculosis is open to discussion the world over. If at the present sanitary convention it were possible for us to discuss the measures to prevent tuberculosis, it is evident that we would not have enough time at the sessions we have at our disposal—not even if we should have a double number of them—to exhaustively treat this subject. My purpose is simply to request the delegates here present, and to those who, like Dr. Roberts, have had great personal experience in the treatment of this disease, to help me in the study already undertaken, since we do not propose to introduce a novelty, but only to agree among ourselves as to the precise rules that should be put in practice in order to prevent the spread of said disease on board vessels and in railroad cars.

We know positively that there are two ways of contracting the disease, namely: through the respiratory apparatus, and through the

digestive apparatus. We should not concern ourselves with the digestive apparatus because there are rules already established and well known to the delegates, as for instance, the taking of good food and good drinks. Therefore, it is not necessary to establish any inspection except on vessels where it is really of the greatest importance to inspect the manner of preparing food for the purpose of preventing the transmission of tuberculosis. With regard to railroad cars, the means which have been proposed are many, but I beg to suggest some of them because they can be easily applied. I am going to show you an apparatus which was constructed by a countryman of mine, and which has the following advantages:

It is a cuspidor made to be placed next to each seat in railroad cars. The cuspidor is small because they are to be used near the persons, but it is evident they could be made larger if desired. The principal feature of the invention is that a continuous current of water passes through; as soon as the cover is lifted and one spits into the cuspidor, an antiseptic liquid, such as a solution of carbolic acid, bichloride of mercury, lime water, or the like, commences to flow, and drops into an interior deposit in the car.

Another colleague of mine suggested to me that perhaps it would be better to cause the sputum to fall on a heated metallic plate, heated either by steam or electricity. In this way, the sputum, being thrown on the plate, the liquid part thereof is evaporated while the solid part is consumed.

I call the attention of the delegates to these suggestions because they may induce other persons to devise other means that have not occurred to me. Of course, we should not forget the recommendation to thoroughly clean the cars, and allow only those persons to expectorate who have portable cuspidors, require the cleaning of seats, and not permit the dusting in cars as is done at present, not to improperly use the broom, and to clean the floor with wet rags, to disinfect the bedclothes used in sleepers, and periodically the coaches themselves. I would add that these measures have already been put in practice. Bedclothes are the most apt to transmit any disease, and a special recommendation must be made concerning this. In American and Mexican coaches, these blankets are placed between two sheets, so that the latter may be easily disinfected, but perhaps it is not so with regard to the pillow cases. These are the means which have been suggested to me, and I request the delegates to point out any other that might occur to them.

Dr. Roberts. Mr. Chairman and delegates: In accordance with the prophylaxis of tuberculosis on vessels, we have necessarily to divide the latter in two classes, namely, ocean and coastwise steamers. The latter, which constitute an integral part of the nation, should be subject to the prophylactic measures on tuberculosis imposed by said country, but with regard to ocean steamers, the difficulty for us is greater, for a very simple reason: each vessel has its rules and regulations imposed by the nation to which it belongs, and therefore, said vessel will not submit to rules prescribed by another nation. For instance, take an Italian, or the vessel of any other nation, having on board Italian immigrants, which is required to have on board a physician for a given number of immigrants, and to have on board a small

dispensary with a special *petitoric*. This is done by Italy in order to protect its emigrants, but as we have no emigration, but only immigration, we cannot, therefore, demand, and it is almost impossible to expect others to submit to certain regulations, which would have to be prescribed by the nation to which the vessel belongs or to which the emigrants belong.

There is no doubt that third class passengers are most liable to contract tuberculosis on board vessels, because they live in common, and it seems to me that it is especially in that part of the vessel where the severest measures should be enforced, causing the same to be disinfected after the landing of the immigrants who occupied it. These immigrants, who are crowded on the vessel and poorly fed, are undoubtedly those who are most liable to contract tuberculosis.

DR. VON EZDORF. My idea on the subject of tuberculosis on vessels is that we cannot take any particularly extraordinary measures against tuberculosis in the traveling public; but one measure I think we should take in regard to vessels, and that is the examination of crews, to provide that crews at least should be free from tuberculosis.

As for the other measures, of course there are always some laws or regulations adopted to prohibit expectoration in public places or places where people congregate, and there should always be regulations of that kind on a vessel. There have been a number of suggestions made in this connection, and one that I have thought would be applicable, is the use of paraffine paper spit cups that could be made in a very cheap form and might even be distributed by means of slot machines, where you could get them for probably a penny or two pennies, with printed directions on the machine how to use the cup and directions for its disposition after it has been used for some time.

Provision could be made for the destruction of the expectoration and the cup at one time by fire, which is the best way to disinfect infected expectoration.

I have one other proposition which I think would be a good one, and that is the screening of all the living quarters of a vessel. I believe that is practicable. It would tend to protect the vessel against mosquitoes and flies.

On vessels the dining and living quarters frequently swarm with flies come in contact with infected expectoration they may deposit some of the organisms or some of this matter in the food or the milk, or in any of the edibles, and I believe that is one way by which tuberculosis may be spread. I therefore consider that the screening of all living quarters is advisable on board a vessel. I had some other points on this subject which I intended to present; I did not know it would be taken up this afternoon.

DR. FERRER. One of the things that any traveler may observe on board a steamer is the fact that napkins are not changed every day. In some steamers they change them only on Sundays, and frequently the napkin which has been used by one person is given to another. It would be advisable to follow the custom observed in sanitariums, namely, to place the napkins in a waterproof cover with the name of the person thereon. In many cities it is quite a common thing to see signs prohibiting expectoration, yet, it was in one of the most progressive cities I have visited—where these signs are used and where fines

are imposed for the violation of this rule—that I saw the greater number of people expectorating on the floor. It would be advisable to devise some practical means of compelling the observance of the rules referred to on these signs.

Chilian railroads have made great progress so far as disinfection is concerned, but there is a custom which should be taken into consideration in the discussion of tuberculosis, and that is a war against the broom and the duster, which are in common use in our countries.

The program only refers to measures against tuberculosis on steamers and in railroad cars, but I think we could go beyond said program and make some other recommendations, such, for instance, as the one proposed by Dr. Soza in his report, prohibiting the employment of consumptive schoolmasters. This has already been prohibited in some countries, but in many others there are consumptive schoolmasters who continue to teach. I have made these remarks in a brief manner because I was not prepared for this discussion.

Dr. González. On one of my last journeys, I observed something that suggested an idea to me. By chance I went to the quarters of the steerage passengers at the time the crew was at dinner, and noticed that all the members of the crew were crowded together, and among them was one who was evidently a consumptive. All of them took their dinner in tin pails which are washed in a basin of dirty water, and wiped with the same rag. Could we not devise some beneficial measure for the prevention of contagion, by ordering the disinfection of these utensils?

Dr. Roberts. I simply desire to make an explanation which may, perhaps, be desirable. We cannot legislate concerning foreign vessels, but only concerning our own, and the danger does not lie in the latter, but in the former.

Dr. Mendizabal. With reference to the question of the prophylaxis of tuberculosis which is being discussed, I regret to say that we have been propagating panic to such an extent that at present people are afraid of a person simply because he expectorates or grows thinner, and in some places this fear has been carried to such an extreme that I know a town where persons are taken to the Police Court only because they find themselves in the condition referred to above, and hotel keepers are fined heavily because they allow people in delicate health to stop in their houses, and, what is still worse, a fine of $50 has been imposed on some people who have expectorated in the street. Therefore, a kind of microphobia has been developed. I may perhaps be told that this fear is the waiting room of prophylaxis, but I would add that in my opinion it has become a real disease, because some persons seem to be even afraid of their own shadow.

That does not mean, of course, that I am opposed to the adoption of measures in this case, because I am one of those who earnestly recommend cleanliness because I consider it the principal factor in life. It is right to prohibit expectorating on the floor, because it is dirty and vulgar to do so, but we should not frighten people, making them believe that simply because they pass near the sputum of a person afflicted with tuberculosis they will be infected. Those of us who have been practicing medicine for thirty or forty years have witnessed three evolutions: there was a time when we did not fear tuberculosis; after-

wards we commenced to fear that the disease might be somewhat contagious, and we now know that it is highly contagious, but our fear has not increased to such an extent as to be exaggerated, because if through the sputum of a consumptive, real contagion should occur, many millions of human beings would have perished by this time. Our lives are full of fears, and we should avoid increasing them, besides, it is really very painful and sad to see society a victim of fear.

A new doctrine is now being advocated, and seems to prevail in Europe, namely, that contagion cannot be acquired through the respiratory organs, and lately Behring's works, and still later those of Clement, have demonstrated that the greater number of infections have been acquired through the digestive organs. Therefore, we are now able to see that we should not fear an expectoration which the rays of the sun will destroy, and that we should not be so much afraid to stay in a railroad car where it will be sufficient to open the windows and let in the air and the sun in order to disinfect it in a more thorough manner than could possibly be done by all the antiseptics known in the world.

Gentlemen: We all know, because we have traveled a great deal by rail in the United States, for instance, that the trains there lack light and air, which are without doubt the best disinfectants that we have, and which have been granted us by Divine Providence. Now, then, I, in the name of humanity, inasmuch as we are here assembled to discuss humanitarian questions, request you to be a little more humane and kind to those unfortunate consumptives. If they do not cause us as much harm as it is supposed, and if we know that the person who enjoys good health and is well fed has nothing to fear, because we have seen many healthy and strong persons who have been in close contact with persons afflicted with tuberculosis, why should we then entertain such fears? Would any of us tolerate, when traveling, accompanied by his wife, that she should be ordered to leave the train simply because she was supposed to be afflicted, or even though she was really afflicted with tuberculosis?

Let us then be humane, and adopt all the measures proposed, which I cheerfully accept, but let us also avoid the spreading of panic, by putting before the people an invisible enemy which causes great fear.

THE CHAIRMAN. The hour for adjournment, in accordance with the rules of the Conference, having arrived, should any delegate desire to make any remarks, he can do so at the next session.

The session adjourned.

FIFTH DAY, FRIDAY, DECEMBER 6.

Morning Session.

The session was called to order by the Chairman, Dr. Licéaga, at 9 a. m., the following delegates being present: Doctors Oswaldo Gonçalvez Cruz, Ricardo Gutierrez Lee, Genaro Payán, Hugo Roberts, Juan Guiteras, Ernesto Soza, Pedro L. Ferrer, Juan Horacio Estévez, Walter Wyman, R. H. von Ezdorf, P. T. Straub, James Gatewood, Rhett-Goode, H. L. E. Johnson, Salvador Ortega, José Azurdia, Luis Lazo Arriaga, Gregorio Mendizábal, Rodolfo B. Gonzalez, Ernesto F. Espiro, and Juan J. Ulloa, Secretary.

The minutes of the previous session being read and approved, the delegates of Costa Rica, of Uruguay, Brazil, and Chile, proposed, in the name of their respective Governments, the capitals of their respective countries as the place in which to hold the next international sanitary conference, and these propositions were referred to the Advisory Committee.

THE CHAIRMAN. In accordance with the resolutions adopted at the last session, we will now continue the discussion of the measures concerning international sanitary police for preventing the transmission of tuberculosis on board vessels and railroad cars, and to that end Dr. von Ezdorf continues to have the floor, and will read an address which he did not have with him at yesterday's session.

DR. EZDORF. I should like to conclude what I had to say in regard to the transmission of tuberculosis from individuals on board vessels. I mentioned yesterday the advisability of having paraffine paper cups provided on board ship and also the screening of the vessel, as practical measures.

In regard to vessels carrying passengers, we have to divide the ships into two classes. We have ships that carry a large number of persons, immigrants, etc., and others that simply carry cabin passengers, first and second class passengers. We also have ships which make only short voyages, and other ships that make long voyages, so that we have to discuss each one of these separately.

Now in regard to persons on board the ship that is carrying a large number of passengers: I think one of the first measures that we have to consider is that they should be educated to understand that the practice of expectorating promiscuously in places frequented by others may be dangerous to their fellow men. I think every one will agree to that, that expectoration is a filthy habit. The second proposition is that all persons should be encouraged to use individual drinking cups, and also cheap paraffine paper cups might be provided for use as expectorating cups—individual cups.

Now, a point that I wish to make in regard to the third class passengers, or steerage passengers, whom Dr. Roberts referred to as being the most dangerous individuals on board the vessels and more likely than the other classes to infect the living quarters, because of lack of ventilation and lack of care—is that the only provision we could make

in regard to those passengers is to endeavor to have them understand that they must not expectorate any where except in the places provided for that purpose, and one of the most practical measures that I think could be adopted on board ship is the use of the paraffine paper cup already mentioned, to be placed folded into a tinform which might hang along the sides of the bunks. As we know, these large steerage passenger vessels are very crowded, and the passengers are in bulks one over the other, sometimes in tiers of three. These cups can be used in cases of seasickness and for all ordinary expectoration. I think that is all we can possibly do with regard to that class of passengers.

These cups could be destroyed by fire, or thrown overboard at sea. That is practicable for any vessel, whether a long-trip or a short-trip vessel.

But with regard to a long-trip vessel where the passage is, say, two or three or four weeks, I think there should be a disinfection of those quarters or barracks of the steerage passengers at the end of each voyage.

With regard to the short-trip vessels, where the passengers are in these steerage barracks for only two, three or four days, I think that periodical disinfection would be quite sufficient.

Whatever measures we wish to adopt should be practical and easy of application, and these have occurred to me as the most practical and easily understood by the steerage passengers that we have to deal with.

As far as the cabin passengers are concerned, I think they can understand instructions, wherever they may be placed in printed form about the cabins. I conclude this exposition with the following conclusions:

1. The traveling public should be educated to understand that the practice of expectorating promiscuously about in places frequented by persons may be dangerous to his fellow-man. Expectoration is a filthy habit and should be made punishable.
2. All persons should be encouraged to use individual drinking cups and cheap paper paraffined cups should be provided on all vessels for passengers.
3. Disinfection of vessels and furnishings of short-trip vessels periodically. Disinfection of steerage passenger barracks at end of each voyage if the voyage has been a longer one.
4. Notices should be posted in steerage quarters and living quarters enjoining passengers not to expectorate on floors.
5. Crews of vessels should be examined physically before being given employment.
6. Screening as far as practicable the kitchen, dining rooms and all living quarters as a protection against flies.
7. Whenever paraffined paper cups are provided, printed instructions should be printed on cups as to use and destruction.

DR. SOZA. Mr. Chairman: The Chilean Delegation, in accordance with the provisions of the provisional program, which requires that each delegate shall give his opinion as to the manner of preventing the transmission of tuberculosis on railroad cars and vessels, has deemed it advisable to submit to the consideration of this Conference the following recommendations:

PROPHYLAXIS OF TUBERCULOSIS ON RAILROAD CARS AND STEAMERS.

1. To avoid, as far as possible, in dormitories the use of fixed carpets and curtains.

2. To recommend the use of cuspidors which should be profusely distributed.
3. The periodical disinfection of cars or berths, including furniture, beds, etc.
4. The disinfection of dining room utensils. In the dining rooms of steamers where napkins are not changed after each meal, the napkins shall be kept in special envelopes.
5. The examination of the personnel and rejection of persons suspected of being afflicted with tuberculosis.
6. Notices posted in conspicuous places which shall read:

TO SPIT ON THE FLOOR IS A FILTHY AND IMPOLITE HABIT WHICH OFTEN CAUSES THE SPREAD OF CONTAGIOUS DISEASES.

DR. JOHNSON. Mr. President and members of the Convention: In accordance with the preliminary programme, I have the following comments to make with respect thereto:

We recommend to the several American Republics that they take the necessary steps toward the codification of all the Health Laws and Regulations, both statute and police, and present the same to the Bureau of American Republics at Washington. The ultimate object being the unification of all such laws and regulations.

(This motion was referred to the Advisory Committee.)

DR. LAZO ARRIAGA. I have heard with pleasure the opinion expressed concerning the prophylaxis of tuberculosis on steamers and railroad cars. I think that all, or at least the majority of us, accept the means suggested for that purpose, and that the principal and almost the only one that could be put in practice is cleanliness; but it seems to me that we should not put difficulties in the way of those afflicted with tuberculosis who desire to travel, or to prevent them from doing so, because, what would be said of a physician who would tell his patient, you can not be cured? What would be said of a physician who would say to his patient: You have such and such a disease? It would be an injury to the patients, and yet that is just what we would be doing by excluding from steamers and railroad cars persons afflicted with tuberculosis.

We were told yesterday that the greatest difficulty in transporting the sick was among second class and steerage passengers. I do not agree with this view of the matter. The poor afflicted with tuberculosis do not travel, not only because they can not afford it, but because they do not desire to do so, and those traveling as emigrants are looking for work and not for health. The sick who travel for the benefit of their health are the rich, that is to say, those who can pay first class passage, and they will have a physician on board who will suggest to them the necessary means not to endanger the health of the other passengers. As I said before, it is not proper to reject such passengers, but to subject them to the observance of certain rules, and to prevent them from knowing that they are seriously ill.

With regard to steerage passengers, and I make this as a motion, I think the steamship companies should be requested to treat the sick as they are treated in hospitals. Many a time it is not poverty that abounds so much in the lower decks of vessels as it is filthiness; people who are starving do not go there; the danger lies in filth, and the steamship companies might compel passengers upon receiving them on board to take a bath; they might furnish them with a special dress

for the voyage, cause their clothes to be washed and disinfected, delivering the same to them at the place of landing. I believe this would be a beneficial measure both to the passengers and to the country.

DR. AZURDIA. On board the steamer on which I came to this city with Dr. Ortega, one of the passengers had a hemoptysis which endangered his life. We had occasion to assist him, and we observed that the physician on board the steamer paid absolutely no attention to that very important disease.

Fortunately, the patient recovered from the hemoptysis in spite of the indifference shown by the physician on board the steamer, but it seems to me that it would be worth while for the Convention to recommend to the different governments to require that the physicians employed on board steamers be duly qualified, and to have, in addition, some knowledge of contagious and infectious diseases, and to be able to advise the necessary prophylactic measures that should be taken in order to protect healthy persons from all danger of contagion.

Therefore, I believe that it would be worth while to recommend this matter to the Governments of the American Republics.

THE SECRETARY. I am going to make a motion, in order to save time. Good scientific measures have been proposed, based on a knowledge of tuberculosis, and also on the experience of physicians, in order to prevent the spread of this disease on railroad cars and steamers.

Fortunately almost all the delegates agree as to the majority of the measures submitted, and, consequently, I move that Dr. Soza, delegate of Chile, and a specialist in the matter, be requested to collect all the opinions and condense in one single proposition all the measures resulting from the different resolutions, in order to submit said proposition to the consideration of the Committee on Tuberculosis.

DR. GUTIÉRREZ LEE. I entirely agree with all that has been proposed concerning the practical measures against tuberculosis, but it seems to me that it is necessary to do something more. I would advise as an additional measure concerning the prophylaxis of tuberculosis that on all newly constructed railroad cars and steamers, there shall be provided a special place for the accommodation of consumptives. At present we find that in ordinary cars two or three sick persons may travel, and if the cars that are to be constructed, because progress has to sanction modern sanitary measures, a special department should be established, that is to say, an infirmary for persons suspected of being afflicted with tuberculosis, I think good results would be obtained. Formerly there were cars on which travelers were exposed to the inclemency of the weather, but at present we find that railroad cars have berths, dining rooms and sitting rooms. Therefore, I believe that it would be an easy matter to secure special cars for the accommodation of patients, since otherwise, if proper attention is not given to the unfortunate consumptives, we would revert to the usages of the Middle Ages when legislation was so severe that patients were seized in their own houses, and even their property was taken away from them. I have read in a certain book that when leprosy prevailed in England and Germany, those afflicted with that disease were not allowed to go into the street and their property was taken from them. In fact they did everything short of shooting them.

I think that we should try to devise means of avoiding diseases, but

in such a way that the patients may have such liberty of action as it would be inhuman to deprive them of. If a person afflicted with cachexy, for instance, a Frenchman or a Spaniard, residing in Vera Cruz, wishes to return to his country, he faces two propositions; either the steamship company admits him in spite of his disease, or he is detained by the physician who acts as an intermediary between the company and the people. In this way the patient is deprived of his desire to die in his country, or of the hope of being cured there. Should the steamship and railroad companies have a complete infirmary then the patient would be able to travel and the companies would be able to transport him. Therefore, we should not be inhuman; science should be charitable, and should not deprive a person carrying the germs of a disease, the virulence of which we do not yet know, of his freedom of action. This would be equivalent to the provoking of a social revolution.

THE CHAIRMAN. The motion made by Dr. Ulloa to the end that the opinions expressed heretofore be referred to Dr. Soza, so that he may make a summary of the same and submit it to the proper committee, is now under discussion. Does any one wish to make any remarks? Shall it be approved? The motion is approved.

DR. MENDIZÁBAL. I have requested the floor simply to make some remarks, in addition to what I said yesterday, on tuberculosis. I am very glad that Dr. Gutiérrez Lee approves the humanitarian measures I took the liberty to suggest, because I still believe that the most advisable means are the most efficient in case of a disease the transmissibility of which is comparatively small. Therefore, we should proceed with great circumspection and care, since otherwise I think the unfortunate consumptives would have to announce their advent by the ringing of bells, so that everybody could avoid them as they pass by.

I desire again to call attention to the difficulties of the modern system of navigation, and the necessity and advisability of adopting a common sanitary law, since otherwise we would have to encounter the greatest of difficulties. I beg to mention an instance. On the large and good Chilean steamer in which I made my last voyage, there was a physician, a medical student, who knew nothing about medicine. There were many passengers on board, and the quantity of merchandise was such that it was stored in the quarters reserved for steerage passengers, and the latter mixed with cabin passengers. The steamer had touched at several places infected with bubonic plague, and, in spite of this fact, everybody was allowed to freely visit the vessel, and to come on board and sell their wares to passengers, such, for instance, as Panama hats, not stopping to think that perhaps some of those who came on board had slept in the same room occupied by a person afflicted with the bubonic plague. There was not on the vessel even a poor quality of vaccine to resort to in case of necessity. These dangers could be avoided if we would adopt a general sanitary law, since then everybody would doubtless take the proper precautionary measures.

We arrived at a port in Ecuador, Guayaquil, where there was no lazaretto, nor any other suitable place for the isolation of the sick, and inasmuch as, for this reason, passengers were not allowed to land, it happened that several of them who were going to Peru were compelled to go to Panama and thence continue their voyage. These

difficulties could be remedied by a law to which all of us would have to submit. The only law now in force is that of the Convention of Washington.

There is a maxim which says that the desire to obtain the best thing possible, some times prevents the attainment of a good thing. If we have something that is not very good, let us adopt that which is the best that we could possibly obtain, even though it may not be the best.

With reference to tuberculosis, I said that traveling is becoming so difficult that it will be necessary to have special trains, such as they now have in the United States for colored people, who, because they have thick lips and kinky hair, it is believed that——

THE CHAIRMAN. I beg to remind Dr. Mendizábal that, in accordance with the rules adopted, the speakers can only have the floor for five minutes.

DR. FERRER. The remarks made by Dr. Mendizábal concerning navigation on the Pacific are true. There is no sanitary service on board the steamers. I remember having been obliged to rise very early one morning in order to attend some passengers because the physician on board did not know what to do. As this is a question affecting the national honor, it is my duty to state that Chilean medical students are not to be found on all Pacific coast steamers.

What is said of Ecuador concerning this matter, is true, as the representative of that country will admit, but it should also be said that there was a floating lazaretto at the port of Guayaquil, which lazaretto was wrecked, and a new one is now being constructed, though of a provisional character.

Yesterday I mentioned the fact that some countries allow persons afflicted with leprosy to embark for foreign ports, but do not allow them to travel from one port to another within the country.

DR. WYMAN. Mr. President and Members of the Convention: In accordance with the preliminary programme, I have the following comments to make with respect thereto:

I have a resolution to offer—not on this subject, however. I would like to inquire if it is pertinent or the proper time to introduce it.

Whereas, It was declared by the Third International Conference of American States held at Rio Janeiro in August, 1906, that the Sanitary Convention should resolve upon the following, viz:

The establishment of relations between the International Sanitary Bureau now existing in Washington and the Bureau Sanitaire de Paris, in order to obtain the best information on Sanitary subjects and to reach agreements that will facilitate the objects with which both offices are established, and

Whereas, the said Bureau Sanitaire International de Paris, though not yet established, will be established in the near future.

Resolved, That the International Sanitary Bureau at Washington is authorized to take such measures as may be necessary to carry out the Instructions contained in the aforesaid resolutions of the Third International Conference of American States held at Rio Janeiro in August, 1906.

THE CHAIRMAN. Let it be referred to the Advisory Committee.

DR. GATEWOOD. Mr. President, I desire to present the following resolution, with a request for reference to the Advisory Committee:

Resolved, That the Sanitary Conference recommend the establishment of sep-

arate hospitals or special wards for the care or treatment of tuberculosis patients.

DR. ROBERTS. I request the floor in order to present the two following propositions:

The undersigned states that, inasmuch as both the railroads and the steamers constitute an integral part of the nation to which they belong, such prophylactic measures as are adopted on said railroads and steamers to avoid the spread of tuberculosis, should be the same as those for hotels, boarding houses, etc., in the nation to which said railroads and steamers belong.

Inasmuch as the object of the Conventions of the American Republics is to unite the quarantine processes in order to protect public health, causing the least possible injury to international commerce, and

Whereas, owing to the lack of uniformity of the bills of health issued in the different American nations, it is difficult to form an exact opinion concerning the same, because they often fail to furnish all the necessary details, I, therefore, beg that the following propositions be adopted:

1. That in the next meeting of the International Sanitary Congress the model forms of the documents to be used by the nations accepting the Convention, be discussed and approved in order to render uniform said documents.

2. That in every port open to foreign commerce, the sanitary authorities shall issue bills of health to all vessels applying for same, in accordance with model form adopted by the next Convention.

THE CHAIRMAN. Let this resolution be referred to the Advisory Committee.

DR. FERNANDEZ ESPIRO. In the brief exposition I had the honor to make last night concerning the International Sanitary Convention of Paris, or, in other words, to that of Washington, which has been based on the former, I expressed the opinion which I entertained regarding a certain clause of that International treaty. Therefore, in accordance with said views, I have thought that this Convention might do a good work on meeting again, if it should endeavor to make such amendments as may be deemed advisable at said Convention of Washington, without prejudice to recognizing the merit of its work, and the noble ends which have guided the persons who participated therein. I believe that a committee could be entrusted with the duty of formulating a plan of sanitary agreement of the Republics, and to submit the same at the next Convention.

This opinion is shared by the delegate of the Republic of Brazil, and in the name of the country which has sent me here, I am going to make a motion to the Convention, hoping that it may be favorably received by the delegates.

This brief motion is as follows:

The delegates of Uruguay and Brazil propose:

1. That the Convention appoint a committee for the purpose of presenting a plan of an International Sanitary Convention of the American Republics to become effective upon the expiration of the Convention of Washington, said plan to be considered by the Fourth Convention.

2. The Commission appointed shall forward said plan to the Chairman of the International Sanitary Office at Washington, in order that said Chairman shall in turn, take the necessary steps so that it may be known in advance by the Governments of the American States.

The latter part of the motion tends to overcome the inconveniences and difficulties encountered when the work is not made known beforehand to the Governments invited to attend these conventions.

THE CHAIRMAN. The motion made by Drs. Fernández Espiro and Gonçalvez Cruz is referred to the Advisory Committee.

In order to make the best possible use of the short time at our disposal, and in accordance with the agreement made at the first session, the consideration of the modifications made in the frontier ports and cities in the different countries, is now in order.

We have a very short time now, so that the reading of any report concerning what the Mexican Government has done would take all the time of the session. In order that the reading may be as short as possible, and that it may be, at the same time, instructive, I have caused an album to be placed in the hall containing views of the drainage and water supply works which have been constructed in the ports of Veracruz, Coatzacoalcos, Salina Cruz, Manzanillo and Mazatlan, as well as views of the sanitary stations in Veracruz, Salina Cruz, etc. On the maps placed on the blackboards will be found the complement of these works.

I have only mentioned the improvement made at the ports, and if I had time I would call attention to those that have been made in the States of the interior of the Republic, whose authorities have sent here the plans and drawings of the works. These documents are on exhibition in the next room.

I shall only read the report made by the Mexican delegation in which are set forth the expenses incurred on account of said works. (See Appendix, page 186.)

DR. FERNÁNDEZ ESPIRO. I have listened with pleasure to the report just read by the Chairman of the Convention concerning the important sanitation works carried out in the Mexican Republic. In conformity with the opinion of all the delegates, I beg to propose that the favorable impression which the perusal of said report has afforded us, be forwarded to the Government of the Republic of Mexico through the Chairman and Secretary of the Convention.

THE SECRETARY. I second the motion of Dr. Fernández Espiro.

THE CHAIRMAN. I gratefully accept the suggestion made by the delegate of Uruguay, and seconded by that of Costa Rica, and shall take pleasure in making it known to the Government.

DR. FERNÁNDEZ ESPIRO. I desire that it be by a vote of all the delegates, saying that the Convention hereby expresses the great pleasure with which it has listened to the reading of the report of Dr. Licéaga, and desires that said manifestation be made known to the President of the Republic.

The motion was unanimously carried.

THE CHAIRMAN. I once more thank you for this honor.

DR. FERRER. Inasmuch as several motions have been presented concerning matters which should be submitted to the consideration of the next Convention, it seems to me that it would be advisable to appoint a special committee to make a report to-morrow on the matter, or that the committee kindly submit a complete plan so that we may have a basis in order to consider these matters at the next Convention.

DR. GUITERAS. I request the floor in order to state that Dr. Ferrer's motion is of a dual character, and I believe this matter should be referred to the Advisory Committee.

THE CHAIRMAN. I agree with Dr. Guiteras, since there would be no time to appoint the committee suggested by Dr. Ferrer. Therefore, the matter is referred to the Advisory Committee.

DR. MENDIZÁBAL. As I said in the previous session, I believe that the subject referring to syphilis and other venereal diseases, which cause such great ravages to mankind, should be discussed at the next convention.

Therefore, I beg to make the following motion:

Whereas syphilis and other venereal diseases which at present may be called the modern plague, cause such great ravages to modern society, degrading the human race, predisposing to the contraction of many other diseases, the delegate of the Republic of Nicaragua submits to the consideration of the Convention, the following propositions:

First. Let the question of the uniformity of the means of defense which each country should take in order to prevent the spread of syphilis and other venereal diseases be recommended to the consideration of the next International Sanitary Convention of the American Republics.

Second. Let these diseases be included in the list of diseases like yellow fever, bubonic plague, cholera, beri-beri, etc., against which all nations are endeavoring to protect themselves.

THE CHAIRMAN. Let the motion of Dr. Mendizábal be referred to the Advisory Committee.

DR. WYMAN. I beg leave to present to the Convention a report from Dr. A. H. Doty, of New York, in compliance with some of the features of the preliminary programme, and he has also transmitted photographs of the work that has been going on in Staten Island for the elimination of mosquitos by drainage of swamps. I will turn this in to the Secretary for such use as he may be able to make of the illustrations or of the articles in question. I would suggest that the photographs might be left on the tables for the members to examine.

I also wish, Mr. President, to invite attention to some very interesting papers that have been transmitted by Dr. Samuel G. Dixon, Commissioner of Public Health of the State of Pennsylvania. They have come to me since my arrival in Mexico, and I have placed them on the table. They show the operations of the Department of Health of the State of Pennsylvania in its several divisions, with a number of photographic illustrations.

Dr. Dixon asked me to kindly transfer these to Dr. Licéaga as President of the Superior Board of Health, after they have been examined by the members of this Convention, and I trust that Dr. Licéaga, as President of the Superior Board of Health, will kindly accept them from Dr. Dixon.

I move that the reading of that report be dispensed with at the present time. I think it would take quite a long while, and it can be included in the proceedings.

THE CHAIRMAN. I beg to remind those present to be at 3 o'clock sharp today at the *patio* (yard) of the building of the Superior Board of Health where the automobiles which will take us to the Colonias de la Condesa, Roma, and Juarez will be in waiting for us. I again recommend the delegates to be punctual.

The meeting adjourned.

Night Session.

The session was opened at 7 p. m. by Dr. Licéaga, the Chairman. The following delegates were present: Doctors Oswaldo Gonçalvez Cruz, Ricardo Guitérrez Lee, Genaro Payán, Hugo Roberts, Juan Guiteras, Ernesto Soza, Pedro L. Ferrer, Juan Horacio Estévez, Walter Wyman, R. H. von Ezdorf, H. L. E. Johnson, Salvador Ortega, José Azurdia, Luis Lazo Arriaga, Engineer Hilario Elguero, Doctors Gregorio Mendizábal, Rodolfo B. González, Ernesto Fernández Espiro, and Dr. Juan J. Ulloa, Secretary. The minutes of the morning sessions were read and discussed.

DR. ROBERTS. Mr. Chairman: I have presented two propositions so that they may be taken into consideration at the next Convention, and I notice that only one of them is mentioned in the minutes.

THE SECRETARY. Dr. Roberts is right. Owing to an involuntary omission, said proposition is not mentioned in the minutes, but it will be added to them.

The minutes were approved as corrected.

THE CHAIRMAN. The subjects to be discussed at to-night's session are the following: Reading of such papers as may be submitted, the object of which is to discover the germs of yellow fever; those the purpose of which is to determine whether there are other mediums of transmitting yellow fever and malaria, than the mosquito bite, and such other essays as may be submitted dealing on the improvement of the method of warring against mosquitoes. These are the subjects to be discussed, and if the Convention will permit, I will grant the floor to Dr. Soza, delegate of Chile, so that he may read a paper on the manner of combatting tuberculosis on board railway cars and steamers.

DR. SOZA. Mr. Chairman: I have the honor to submit to the Advisory Committee the following summary which agrees with the several motion made by the following delegates: Dr. Ricardo Gutiérrez Lee, of Colombia; Dr. Hugo Roberts, of Cuba; Dr. R. H. von Ezdorf, of the United States; Dr. H. L. E. Johnson, of the United States; Dr. José Azurdia, of Guatemala, Dr. Luis Lazo Arriaga, of Honduras; Dr. Eduardo Licéaga, of Mexico, and the Chilean Delegation.

1. To avoid, as far as possible, the use of fixed carpets and curtains.
2. To recommend the use of cuspidors which should be profusely distributed.
3. The daily disinfection of cars or berths, including furniture, beds, wash basins, etc. All clothes, including napkins, should be disinfected before being washed.
4. The disinfection of dining room utensils. To avoid keeping napkins together, or if so kept, each should be covered with an envelope of the same cloth, and to avoid the entrance of flies to the kitchen. to the cook's quarters, etc., by covering all openings with wire gauze.
5. The examination of the personnel before employing the same, and dismissal from service should any of them be afflicted with tuberculosis.
6. All steamers and railway trains should be provided with a special and comfortable department for the transportation of consumptives, and upon transporting them projecting decorations, acute angles and holes that may favor the retention of dust, should be avoided.
7. The posting of notices in conspicuous places which shall read as follows:
"TO SPIT ON THE FLOOR IS A DIRTY AND IMPOLITE HABIT, AND IN MANY INSTANCES CAUSES THE SPREAD OF CONTAGIOUS DISEASES."
8. Physicians on board steamers should be graduate practitioners.

THE CHAIRMAN. As it was decided this morning, this proposition will be referred to the Advisory Committee for the proper consideration and decision. Dr. Payán will now read the recommendations of the Committee on Malaria, so that they may be referred to the Advisory Committee. I beg Dr. Guiteras to kindly translate them into English.

DR. PAYÁN then read the following document:

The Committee on Malaria of the Third International Sanitary Convention, after having considered the different motions made on malaria submitted by Doctors Azurdia, Lazo Arriaga, Guiteras, von Ezdorf, and Hugo Roberts, and after hearing the opinions expressed by the delegates who participated in the discussion of the same, has decided to submit to the Advisory Committee the following resolution:

1. To recommend to the governments represented at the International Sanitary Convention that quinine salts, fine wire gauze to be used for protection against mosquitoes, crude petroleum, ready-made mosquito nets and material used in their manufacture, be exempt from customs duties.

2. To recommend that the governments, through their respective sanitary authorities, carry out the most active popular propaganda concerning a knowledge of the etiology, prophylaxis and treatment of malaria, and to encourage public lectures on said subject in the schools, shops, barracks, etc.

3. To recommend that there shall be established in such places as may be necessary, headquarters for the distribution, gratis, of quinine among the poor on medical prescriptions and for the prophylaxis of malaria.

4. To recommend to the governments to direct that the sanitary maritime authorities shall state in bills of health issued by them, the mortality caused by malaria.

5. To recommend to the International Sanitary Bureau permanently established in Washington, the sending of regular reports concerning the existence of malaria in the principal seaports.

6. To likewise recommend to the governments the publication of a handbook in which shall be compiled, in a brief, simple and practical form easily understood by the people, information concerning malaria, and afterwards to have an understanding with the Governments on the matter so that they may cause the handbook to be extensively distributed.

The Chairman again read the subjects of the program open to discussion, and asked if any of the delegates wished to make any remarks.

DR. GUITERAS. I have a short paper that I am going to read concerning the last subject of to-day's program, that is to say, the campaign against yellow fever and mosquitoes, but before reading it, I wish to refer to the second subject mentioned in said program, or that which has for its object the determining whether there are other means of transmitting yellow fever and malaria in addition to the mosquito bite. With regard to this matter, I wish merely to say that the constant experiments made at the "Hospital de Las Animas," established in 1901, concerning this disease continue to show from day to day that there is no other medium for the transmission of yellow fever. The experiment to which I refer for the treatment of the cases which occurred in said hospital, taken from the focus where the disease originated, and since that year yellow fever has not spread to any considerable extent among those who are not immune. Therefore, I consider this an experiment which shows from day to day that there is no medium for the transmission of said disease. The report I am going to read is based on a tour of inspection to Cienfuegos. (See Appendix, page 166.)

(On concluding the reading of his report, Dr. Guiteras was enthusiastically applauded.)

THE CHAIRMAN. Dr. Guiteras has just handed to the Chair the translation into English of the paper he has just read.

Gentlemen: I have listened with great pleasure to the interesting report made by Dr. Guiteras. In this transmissible disease, yellow fever, the most important point lies in the detection of the first cases. When the sanitary authorities know the focus of infection, then it may be said that they have found the Ariadna thread, which was what happened in the instance referred to by Dr. Guiteras, and then it can be said that the disease is controlled. If the cases were not so numerous among the military force as among civilians, what Dr. Guiteras has just told us would be sufficient. In the case referred to by Dr. Guiteras, it was evidently possible to determine, as he has just said, that the mosquitoes which attack the military force came from the midst of civilians, and in this instance it was possible to extinguish the disease because the focus was found. Whoever has the good fortune to detect the first cases may be sure of success. We are following the process that Dr. Guiteras has just set forth by means of the flying brigades (I don't know whether they are called by another name in other Spanish countries, but among us we call by this name the groups of men who go from one place to another to discover the occurrence of new cases).

I wish to state in as few words as possible the process we follow in our struggle against yellow fever. The first report is considered as the fundamental basis; we have yellow fever spies everywhere who give us the alarm by saying: There is a suspected case in such and such place. As the towns are not far from each other, and as there are means of communication, such, for instance, as the railroads which cross the State of Veracruz, I receive the report by telegraph and by the same means I forward the information to the chief of the flying brigade so that he may immediately start to investigate the case. Then he goes to the place, provided with all the elements of disinfection and for isolating the patient. The isolation is made, steps are taken to find suspected persons, and afterwards the disinfection is made not only of the houses occupied by the patients, but also of those surrounding them. When this operation has been completed, the second follows, namely, the destruction of the larvae, so that they may be quickly exterminated. This process has given excellent results, and if I have taken the liberty to call attention to it, it is simply in order to ratify the views expressed by Dr. Guiteras.

As to the difficulties for disinfecting the dwellings, we have not encountered the great ones to which Dr. Guiteras has referred, because it is the houses of the poor that we have to disinfect, and they are scantily furnished, and whatever furniture they have is of little value, and if necessary we pay for it. Therefore, said houses can be readily disinfected by simply covering the doors and windows. Should it be impossible to do so, then the sheet referred to by Dr. Guiteras is applied, which we call Victoria, after the city where Dr. Del Rio invented it, and I will now tell you the history of it because it is interesting. In 1903 we had yellow fever in the city of Victoria, capital of the State of Tamaulipas, and there we found a very intelligent person

whom Dr. Guiteras knew, namely, Dr. Narciso Del Rio. He was a very active man, and for the treatment of and campaign against yellow fever, I imposed upon him the following conditions: "You must not leave until the town is disinfected."

Dr. Del Rio made many attempts at disinfection, but, inasmuch as the disease reproduced itself continuously in the poor people's huts, which had poorly joined walls, or common reed grass which leaves large cracks between each other, and grass roofs, through which the mosquitoes escape and render the disinfection inefficient, he almost despaired of solving the problem of disinfecting the huts, or *jacales,* as they are called in Mexico. As I insisted that it was necessary to completely eliminate yellow fever from the City of Victoria, Dr. Del Rio first devised the idea of wrapping up the huts in a canvas sheet. He was led to devise this means by the knowledge he had of the fact that the mosquitoes upon smelling sulphurous acid fly out of the room to be disinfected, or from the hut, as the case may be, through the cracks through which light penetrates. You know the smallest cracks are sufficient for the escape of mosquitoes, as was shown by the experimental study made by the same doctor, which consisted in closing a room air tight, leaving the key hole uncovered, and covering the lock with a funnel with the vertex closed; introduce ten mosquitoes in the room where formerly there were none, burn the sulphur and then it was observed that of the ten mosquitoes seven had died and three of them had escaped through the lock of the door and were held prisoners in the glass funnel that had been placed there in order to prevent their escape. Therefore, the problem consisted in covering all the cracks and openings through which the light penetrates.

The process invented by Dr. Del Rio to prevent the escape of the mosquitoes and which I described in Havana in January, 1904, during the sessions held by the American Public Health Association, is the following: Take a strip of canvas of regular width, nail it to the ground against one of the side walls of the hut; spread the cloth tightly against the wall until it reaches a point underneath the eaves of the roof; fix it there with a strip of wood attached to the wall by means of a support resting on the floor, continue spreading the canvas strip around the eaves of the house, and so on with the inclined plane constituting the roof; then draw it down through the other inclined plane of the opposite side; turn it under the eaves of that side of the hut until it reaches the vertical wall where it is fixed by means of a wooden cross beam or strip similar to that of the other side; then the strip of canvas is caused to follow the wall into the interior where it is again nailed down. On this strip of canvas the following is placed overlapping each other, and on this layer another is placed, and so until the whole length of the hut is covered. Then the front and rear part of the hut remains to be covered. This is accomplished by sewing together other canvas strips, the extent and shape of which must be the same as those of the front of the hut to be covered, and the piece is united by means of a seam to the first of the strips already mentioned. A similar operation is made with regard to the rear of the hut. Before closing the last part, the combustion of the sulphur is started, and the entrance door is closed. Then the hut is closed air tight within the canvas cover, as shown by the drawings which I have

the pleasure to submit to this assembly. I again repeat that I described this model in Havana, in January, 1904. To be brief, I will say that the experience we have acquired enables us to advise, as Dr. Guiteras has just said that it hapened in his case, that it is necessary immediately to look for the focus until it is found, and to apply to every house or hut the aforesaid process by using the said cover, and then there is no danger of mosquitoes escaping through the openings. (Applause.)

DR. GONÇALVEZ CRUZ. The struggle against yellow fever at Rio de Janeiro, by means of the fumigation of the houses covered with canvas, in order to prevent the escape of the mosquitoes, was tried at different times. This process was employed in all houses of whatever construction and was adopted from the beginning of the campaign against yellow fever.

THE CHAIRMAN. Does any other person wish to make any remarks?

In accordance with the rules adopted from the beginning of the sessions, we should proceed to discuss the following subjects, but those to be discussed in the morning session are of such a character that it would not be possible to discuss them in this one, since they are pending decision in the Advisory Committee, and with regard to the submission by each delegate of a paper concerning the organization in his country of a committee composed of three physicians or sanitary officials for the purpose of forming part of the International Sanitary Information Committee of the American Republics, although it would be the only subject that could be discussed, I would say that, so far as I am concerned, although the organization is already made, I have no official advice in the matter, and I think the same is true of the other delegates. At all events, I would request that the session be adjourned so that the Advisory Committee may have sufficient time to work, especially in view of the fact that the session will only last 20 minutes more. The session is, therefore, adjourned.

SIXTH DAY, SATURDAY, DECEMBER 7.

Morning Session.

The session was opened at 9 a. m. under the presidency of Dr. Licéaga, the following delegates being present: Dr. Oswaldo Gonçalvez Cruz, Dr. Ricardo Gutiérrez Lee, Dr. Genaro Payán, Dr. Hugo Roberts, Dr. Juan Guiteras, Dr. Ernesto Soza, Dr. Pedro L. Ferrer, Dr. Juan Horacio Estevez, Dr. Salvador Ortega, Dr. José Azurdia, Dr. Luis Lazo-Arriaga, Lic. José Algara, Engineer Hilario Elguero, Dr. Gregorio Mendizabal, Dr. Rodolfo B. González, Dr. Ernesto Fernández Espiro, Dr. Walter Wyman, Dr. R. H. von Ezdorf, Dr. J. Gatewood, Dr. Rhett Goode, Dr. H. L. E. Johnson, and Dr. Juan J. Ulloa.

The minutes of the preceding session were read and approved without discussion.

THE CHAIRMAN. In the morning session of today the following matters will be taken into consideration: Discussion of pending matters; adoption of the resolutions taken in the preceding sessions; presentation by each delegate of a report regarding the organization in his country of a commission composed of three physicians or health officers for the purpose of forming part of the International Sanitary Informing Commission of the American Republics.

THE SECRETARY. I will take the liberty to read the first resolution adopted by the Executive Committee:

> The Executive Committee has the honor to submit to your consideration the following report on the different subjects referred to it—
>
> 1st. To request the delegates from the Governments of Brazil, Colombia, and Uruguay, subject to the full powers with which they are invested, to adhere to the Sanitary Convention of Washington of 1905.

THE CHAIRMAN. I beg to submit this resolution to the approval of the delegates and I would allow myself to request the Delegation from Chile to declare also their adherence, as Dr. Ferrer gave us yesterday the most pleasant news that the Government of his country has already under its consideration the ratification of said convention and has manifested its adherence. Therefore, I do not believe it necessary for said delegation to make its adherence by signature.

DR. FERRER. I thank the President for his kind words, and beg to state that the Chilean Delegation will have the honor to affix its signature to said resolution.

THE CHAIRMAN. But as it was already adopted by the Chilean Delegation and signed by its representative, I said that we would take into consideration the words expressed by the Delegation of said Republic, stating at the same time it was not necessary for that Delegation to affix its signature to the resolution in question because the adherence had already been made.

The resolution was adopted.

DR. LAZO-ARRIAGA. In the name of Honduras, I will have great pleasure in signing.

Dr. Juan J. Ulloa, of Costa Rica,

Permanent Secretary; President-elect of the Fourth International Sanitary Convention to be held in San José de Costa Rica in December, 1909.

DR. GUTIERREZ. We accept and are ready to sign the adherence *ad referendum.*

DR. FERNÁNDEZ ESPIRO. I also accept and with the greatest pleasure I manifest my adherence.

Dr. Gonçalvez Cruz, Delegate from Brazil, also adhered in the name of his country.

THE CHAIRMAN. I am now going to have a copy made of this resolution in Spanish, English, and Portuguese, so that it may be signed by all. It is indispensable that there be a center and this is the Department of State of the United States. Therefore, one of the acts—because this is an act—will have to be sent to the Department of State of the United States and another will be formally filed with the Department of Foreign Relations of this Republic.

As the Secretary is going to withdraw in order to prepare the resolutions that were adopted last night by the Advisory Committee, I request Dr. Guiteras that he be kind enough to act as Secretary.

Dr. Guiteras took the Secretary's chair.

THE CHAIRMAN. As we will have to wait until the resolutions of the Committee are ready, I move that another matter described in the programme be taken up, and that the Delegate from Brazil be kind enough to make the presentation referred to in Section 4.

DR. GONÇALVEZ CRUZ (Reading):

ORGANIZATION OF THE BRAZILIAN COMMITTEE TO FORM PART OF THE INTERNATIONAL SANITARY INFORMING COMMISSION OF THE AMERICAN REPUBLICS.

The Brazilian Commission will be constituted by the Chief of the Demographic Service of the General Bureau of Public Health, and of two assistant physicians from the same division.

The organization of that service is already provided for in Section 18 of the Regulations of the Sanitary Services in charge of the Union.

The Division of Demography publishes its reports in weekly, monthly, and yearly bulletins. The monthly and the annual bulletins will constitute the source of information that Brazil will furnish to the International Commission.

DR. FERNÁNDEZ ESPIRO. I believe that no other delegate is in the same position as the Delegate of Brazil to present at this moment a report regarding the constitution of a commission of three physicians provided for in the programme. Therefore, I would make the following motion: That the Delegates of the different American Republics, upon arriving at their respective countries, manifest to their Governments the convenience and urgent necessity of constituting a commission of three persons, and that as soon as the Governments shall have appointed said committees, the International Bureau at Washington be notified. I believe that this is the most practical solution, as I understand that none of us is empowered to propose which persons should constitute said committee.

THE CHAIRMAN. I agree with the motion of Dr. Fernández, but as I am authorized, as my delegation is authorized, I am going to read the report which it submits. I repeat that I am entirely in accord with the motion that such delegates as are not expressly empowered by their Governments may fulfill this provision of the programme in the manner suggested by Dr. Fernandez, and then his motion is placed before the Convention, reserving myself the right to read the report that I have.

DR. LAZO ARRIAGA. I agree with the motion of Dr. Fernandez, because, although I am authorized to designate the persons that would constitute the Committee in question, in accordance with the laws of my country, it is the Government who makes these appointments.

THE CHAIRMAN. Gentlemen, Section 4 of the provisional programme of this Convention says:

> Each Delegate shall present a report regarding the organization in his country of a Committee composed of three physicians or health officers to form part of the International Sanitary Informing Commission of the American Republics, as is provided by paragraph 3 (b) of the resolutions adopted in Rio de Janeiro.

As the intention of this provision is to create a center of information for all the American Republics, I believe that its purpose is carried out as regards Mexico, by appointing the Superior Board of Health as the Committee to form part of the Informing Commission, as it is a federal sanitary office which compiles directly the statistics relating to public health of the ports, border cities, and other important centers of the country, and is thus enabled to fulfill easily the purposes sought by the Rio de Janeiro Conference. But in order to conform with the letter of the provision in question the Superior Board of Health appoints as members of the Committee Dr. Eduardo Liceaga, Dr. Nicolas Ramirez de Arallalo, and Dr. Jesus E. Monjaras.

Its organization shall be the same as that of the Superior Council of Health, which is the advisory board of the Government of the Republic.

DR. FERNÁNDEZ ESPIRO. The Third Pan-American Conference of Rio de Janeiro provided that Montevideo should be one of the centers of information to be in communication with the International Sanitary Bureau of Washington, but I do not know that that Conference specified which should be the Republics that should send their communications to the International Bureau at Washington so that this center might in turn send its reports to Montevideo. Therefore, I would like that this point be decided by the Convention in order to avoid any future controversies which might hinder the routine of said reports.

THE CHAIRMAN. I believe it would be wise to take into consideration the motion of the Delegate from Uruguay, for it is not sufficient to establish centers of information. It is understood that the intention of the Rio de Janeiro Conference was to provide a speedy and efficient method of furnishing the data required, and to that end it established three centers in the world, one in Paris, another in Washington, and another in Montevideo. What is proper and logical is to adopt the following division: From Ecuador towards the north to Washington; from Ecuador towards the south to Montevidio; these two centers might communicate with the center in Paris. This division seems to me the most natural one, and it is the resolution that I submit to the Convention, because this Convention, originated by the Rio de Janeiro Conference, should interpret such doubtful points as may exist in the resolutions adopted by the latter.

DR. ESTEVES. As Ecuador remains in the dividing line I would like to know if it belongs to the northern or to the southern section.

THE CHAIRMAN. According to my proposition, it belongs to the northern section.

DR. GUITERAS. It seems to me that we ought not to limit ourselves to the Equatorial line, but that instead the countries near to Washington

should establish communication therewith, and those farther south with Montevideo.

DR. ESTEVES. It seems to me that Ecuador is farther north and it is nearer Washington than Montevideo.

DR. GUTIERREZ. I believe that it is very easy for us, now that we are here assembled with brotherly purposes, to determine which should be the center to which we should address our reports. I believe that Brazil, Argentina, Uruguay, Paraguay, and Chile have their center in Montevideo; Ecuador, Venezuela, Colombia, and the Central American Republics, in Washington; Peru, being more accessible to the Isthmus of Panama, should also address to Washington; furthermore, the official and commercial communications of this latter Republic are sent via Panama. Regarding the Colonies in the Continent, belonging to Holland, France, etc., such as English Guiana and others which are not included in our International Convention, I will say that we should take them into consideration, because in Cayenne, as well as in Georgetown, cases of yellow fever have been recorded; this is a question upon which I would call the attention of the Convention in order that we may have connection with said Colonies as a whole, thus establishing sanitary relations with them.

THE CHAIRMAN. Precisely. The remarks just made by the Delegate from Colombia show the advisability of establishing relations between the information centers of Washington and Montevideo and the central bureau of Paris; but until an agreement is reached we will not be able to determine anything in regard to said colonies, for, although they are in America, they are European dependencies, and it is not within our power to make any provisions in regard to them. The most proper and logical course is that indicated by Dr. Gutiérrez. These colonies should send their reports to America because their sanitary interests are more closely related with the Continent than with Europe. I do not believe that we ought to decide this question but only outline it, because this Convention cannot adopt a resolution as the previous one, for as long as the Chiefs of the three centers do not reach an agreement, whatever decision we might take would only be a theoretical one, and as all our resolutions should be highly practical and effective, I move that the Convention approve this matter. (Approved.)

DR. GUITERAS. I take the liberty to remind the Convention that in one of the previous sessions I submitted a proposition to the effect that an agreement should be reached among the three centers of information in regard to said colonies. This resolution is now before the Executive Committee.

THE CHAIRMAN. According to what Dr. Guiteras has just now said, we will wait for the decision that the Advisory Committee will now render in which will be included both Dr. Guiteras' motion and mine.

The session was suspended to wait for the report of the Committee.

The session was reopened, and the Secretary read the decision of the Advisory Committee, a translation of which into English was made, and which is as follows:

Delegates to the Third International Sanitary Convention:

"The Advisory Committee has the honor to submit to your consideration the following report on the different subjects referred to it:

1. The representatives of the Governments of Brazil, Colombia and of Uruguay are requested to adhere to the Sanitary Convention which was signed in Washington in 1905.

2. To the American governments represented in this Convention is recommended the codifying of all the sanitary laws and regulations of the respective countries, and as soon as this is accomplished to forward copies of them to the International Sanitary Bureau at Washington.

3. The Convention is recommended to authorize the International Sanitary Bureau of Washington to establish by means considered by them to be most convenient corresponding relations with the International Sanitary Bureau of Paris in accordance with the declaration made by the third Pan-American Congress held in Rio de Janeiro August, 1906.

4. That the Secretary be authorized to include in the publication of the proceedings of the Third International Sanitary Convention a summary of all the resolutions adopted by the first and second International Sanitary Conventions held in Washington.

5. That recommendations be made to the American Governments of the convenience of agreeing upon compulsory vaccination against smallpox.

6. That recommendations be made to the Governments represented in this Convention of the convenience of declaring free from State taxes the sale of quinine, fine wire mosquito netting to be used as a protection against mosquitoes, crude petroleum, mosquito bars and material used for that purpose.

7. That recommendations be made through the medium of the respective sanitary authorities that the Governments enter into a most active propaganda on the etiology, prophylaxis and treatment of malaria and resolve upon the establishment of public conferences on these subjects in schools, shops, barracks, etc.

8. That recommendations be made for the establishment of centers at necessary points for the free distribution of quinine to the poor in necessary quantities for the prophylaxy of malaria.

9. That recommendations be made to the Governments that they order the maritime sanitary authorities to include in the public health reports which they issue the mortality occasioned by malaria.

10. That recommendations be made to the International Sanitary Bureau at Washington to furnish regular information in regard to the existence of malaria in the principal sea ports.

11. That recommendations be made to all Governments alike for the publication of a pamphlet in which be compiled in a brief, simple and practical form, easily understood by the public, facts concerning malarial fever, for liberal distribution.

12. That recommendations be made to the governments that they prohibit the immigration of persons suffering from trachoma and beri-beri.

13. That recommendations be made to the various American nations for the legal and adequate steps in favor of the nationalization and centralization of sanitary authorities.

14. That to the American governments be recommended the following suggestions for the prevention of tuberculosis in railway cars and steamships: (a) To avoid, as far as possible, the use of carpets and fixed curtains. (b) To recommend the use of spittoons well distributed. (c) Periodical disinfection of cars and staterooms, including furniture, beds, washbowls, etc. These disinfections should especially be made in the third class. All clothing, including napkins, should be disinfected before being washed. (d) Disinfection of dining-room service and the use of paper envelopes by the passengers for napkins; also that the food be covered with wire screens at ports and that the windows of railway cars, staterooms and habitations on vessels be screened with fine wire nets to avoid the introduction of flies. (e) The examination of employés of vessels and passenger trains in order that tuberculosis subjects are not employed. (f) All vessels should have a special and comfortable department for the accommodation of tuberculosis patients, its construction not to admit of the retention of dust in any part. (g) The pasting of notices in public places condemning the habit of spitting on floors. (h) Recommending that the physicians at the border not only be graduates in their profession, but, if possible, to have a special knowledge of the prophylaxis of tuberculosis.

15. That recommendation be made to the effect that the European Nations adopt the Convention of Washington of 1905, in their American colonies, specially in what concerns yellow fever.

16. To recommend the American Nations that their bills of health contain the same kind of information.

THE CHAIRMAN. The recommendation respecting the etiology of yellow fever has been stricken out. The resolutions just read are now before the Convention.

DR. ROBERTS. I have presented a motion regarding the regulations to which ships should be subjected in order to protect the lives of passengers. I would like to know if it has been rejected.

THE SECRETARY. The Committee will bear in mind the remarks of Dr. Roberts.

DR. WYMAN. I have two resolutions that I think are important, and I suppose they may yet be considered by the Advisory Council and be reported on this afternoon, or they could be adopted by the Convention right now. Are we to have another report from the Advisory Council? These are the resolutions:

Whereas: The Third International Conference of American States, held at Rio de Janeiro in August, 1906, by resolution declared that the delegates to this International Sanitary Convention should resolve upon practical means for the adoption of measures intended to obtain the sanitation of the cities and, specially, of the ports,

Resolved, that this subject be one for consideration also by the members of the next International Sanitary Convention to be held in Costa Rica, and that the International Sanitary Bureau in Washington be authorized to make investigations and to take such other action as may be necessary to present this matter in satisfactory form at the said Convention in Costa Rica.

Resolved, that the Sanitary Conference recommend the establishment of Separate Hospitals or Special Wards for the treatment of tuberculosis patients.

Resolved, that a location be furnished by the Bureau of American Republics for the use of the International Sanitary Bureau.

That a clerk is authorized to be employed and paid by the International Bureau.

That expenditures be authorized and certified to by the same Bureau.

That the Bureau of the American Republics be charged with the collection of the fund provided for by Section 7 of the resolutions concerning International Sanitary Policy adopted by Second International Conference of the American Republics held in México in 1901-1902.

That the Bureau of the American Republics is also charged with the custody of the fund and keeping of the accounts.

I will say in submitting these post resolutions that I have prepared them, in conjunction with Mr. Yanes who represents the Bureau of American Republics here and that they meet with his approval.

Dr. Roberts was given the floor.

DR. ROBERTS. Taking into consideration the great advantages that result from enforcing sanitary measures as near as possible to an infected locality, not only to prevent the introduction of cholera, bubonic plague, and yellow fever into another locality, but also to protect the lives of passengers in ships sailing or leaving the said infected locality, I move:

"That a resolution be passed in the next Convention prescribing measures to which should be subjected passengers, cargo, and ships leaving an infected port in order to give greater protection to the lives of passengers, preventing the occurrence of cases on board." (Approved.)

THE PRESIDENT. I move that the motions of Dr. Wyman and Dr. Roberts be placed before the Convention, but as Dr. Fernández Espiro has asked to be heard, I would request the Delegate from the United

States to present his resolutions afterwards so that they may be voted upon immediately, as I have suggested.

DR. FERNÁNDEZ ESPIRO. I agree with the propositions presented by the United States Delegation, especially the second one, as it refers to a question of great importance which will be adopted by the Fourth International Sanitary Convention of American Republics. This resolution of Dr. Wyman refers to the memoranda that should be presented by the different delegations in regard to sanitation works. I repeat that I consider this matter as one of high importance, and I believe that it should be specified with greater details so that the next Convention may become acquainted with all that has been done between the two meetings, and I think that what the Chair has done with respect to the proposition of the Chilean Delegation should be done in regard to that of Dr. Wyman, that is to say, it should be placed before the Convention immediately.

The other point is this: The Delegations of Brazil and Uruguay had presented a motion providing for the revision of the Convention of Washington, at the Fourth Convention, on the understanding that this Convention of Washington had a fixed limit; but since there is no such limit, the proposition presented by the Brazilian and Uruguayan Delegations is not necessary. In the name of Dr. Cruz and my own, I move that said motion be withdrawn in order that it shall not appear in the report of the Committee.

THE CHAIRMAN. I wish to explain to Dr. Fernández Espiro the reason why we have adopted the proposition that persons suffering from trachoma and beri-beri be rejected. I consider it a very important question for us and for all the countries.

The basis consists in the fact that both being acute diseases and that in yellow fever, it is possible to make the isolation, and all nations have undertaken the task of gathering together these patients and isolating them, assisting them until they recover; but such process can not be imposed in the case of prolonged diseases and when the cases are very numerous.

I am going to give an instance, which I hope will convince the delegates. It is only four months ago that it was decided in Mexico not to admit to the country persons afflicted with trachoma and beri-beri. Now, during that period of time, about 500 persons afflicted with trachoma have arrived in the country. What place or lazarettos sufficient to accommodate persons having trachoma, who at that rate would enter the Republic in a year, could we have? For this reason, we follow the rule that in case of acute diseases each nation must gather the patients and place them in the proper institutions in order not to compel them to return on the same vessel, but in the case of transmissible chronic diseases it is not possible to do this. Dr. Fernández has made an explanation concerning his vote, but I wish the Convention to know why the Advisory Committee has adopted this resolution.

(The propositions formerly submitted by Doctors Wyman and Roberts were voted upon and unanimously adopted, and added to the resolutions approved and submitted by the Advisory Committee.)

DR. ORTEGA. As Doctors Licéaga and Ulloa will call on the President of the Republic, I take the Chair at the request of the former, and Dr. Guiteras will kindly act as Secretary.

(Dr. Ortega having taken the Chair, the floor was granted to Dr. Azurdia.)

DR. AZURDIA. As to the point concerning compulsory vaccination referred to in a rule of the Convention, I would like that the following exception be made: The laws of Guatemala provide that vaccination shall be compulsory, and said law implies generally to all American countries. Therefore, I would like to have it stated that this resolution applies only to those countries where vaccination is not compulsory.

DR. MENDIZÁBAL. I should like to add the following to this resolution: That not only vaccination, but re-vaccination, which is already enforced in all countries of the world, should also be recommended.

DR. GUITERAS. I wish to express my opinion concerning the first point. It seems to me that a general recommendation may be unnecessary, in those countries where vaccination is already compulsory. As to the other recommendation, I have nothing to say.

THE CHAIRMAN. Do the delegates agree to the amendments proposed by Doctors Azurdia and Mendizabal?

DR. GUTIÉRREZ. I believe this is a question of phraseology. If the countries have already established vaccination in their laws, it is not necessary to allude to it in a new resolution.

DR. AZURDIA. I second the proposition of Dr. Mendizábal in regard to vaccination.

DR. ROBERTS. I believe that by using the words "vaccinal immunity" the question would be settled, and I make this suggestion for the sake of brevity.

DR. GUTIÉRREZ. I thought it was sufficient to make that one recommendation, because the word vaccination is the common term, and re-vaccination is not a new term. But if we use the words vaccinal immunity they will be understood, but they will not have the exact meaning given them by the Government and the people, because the phrase is technical. Therefore, I think the word vaccination is sufficient, because, although re-vaccination is necessary after eight or ten years, I understand that the same is compulsory, because in case of an outbreak of smallpox the people themselves would request re-vaccination.

DR. AZURDIA. I completely agree with Dr. Roberts from a technical point of view, since we should be familiar with technical terms, and especially concerning the administrative branch of the Government, but from the point of view of the layman, I believe that in order to understand the exact meaning of re-vaccination, that this familiar term be used.

It is precisely for the purpose of obtaining the results suggested by Dr. Gutierrez that I insist in the use of said common familiar terms. We do not wish to specify that there shall be re-vaccination after eight or ten years, simply because if we are going to wait that long, because in an outbreak of smallpox said provision would be of no avail.

DR. GUITERAS. The fifth recommendation reads:

> To recommend to the American governments the advisability of prescribing compulsory vaccination against smallpox.

It seems to me that this fully covers the ground.

Dr. Roberts. Then, it behooves each country to prescribe in its laws the period of time that shall intervene from one vaccination to another.

Dr. Guiteras. The Chairman requests me to ask whether article V shall be modified or remain as it now stands.

Dr. Payán. I move that the article remain just as it now stands.

Dr. Guiteras. The Chairman understands that the majority of the delegates is in favor of said article remaining just as it has been drafted, and therefore requests that it be approved. (The article was approved.)

Dr. Guiteras then read the following proposition made by the Chilean Delegation:

Whereas, The international prophylaxis of tuberculosis so far as it concerns navigation and railway transportation, should be the result of the perfect interior organization of countries in their systematic struggle against said disease, the Third International Sanitary Convention recommends to the Governments of the nations here represented the general employment of the sanitary measures against the invasion of said disease.

(The proposition was approved.)

Dr. Payán. I have requested the floor simply to give my vote to said proposition. It seems to me that a country can not demand sanitary measures from other countries until said country properly observes them itself. Therefore, in order to demand that international prophylaxis be enforced at all ports, the country in interest should have the elements necessary to enforce said rules. Therefore, I approve said proposition.

(At this moment Doctors Licéaga and Ulloa returned and took charge of their respective posts.)

Dr. Wyman. Mr. President, I have received a telegram this morning from Rome, Italy, from the American representative in Rome appointed by the Government of the United States to meet the other representatives from other countries, in order to form the International Sanitary Bureau of Paris.

The International Sanitary Convention agreed to at Paris provided that later delegates should be sent to Rome to organize the International Sanitary Bureau at Paris. Among the delegates sent to Rome was one from the United States, Dr. McLaughlin, and in giving him his instructions I directed him informally to convey to the members present at that conference the resolutions passed at Rio concerning the intercommunication between the International Sanitary Bureau of Washington and the International Sanitary Bureau at Paris. I have a telegram from Dr. McLaughlin which I would like to read, showing that evidently the President of the International Sanitary Bureau of Paris is in hearty accord with the idea of intercommunication between the two bureaus:

Cablegram.—Rome, Dec. 6, 1907.—General Walter Wyman, American Embassy.—Mexico.—Resolution 3 D Rio Conference 1906 read here. President expressed pleasure of this Conference with same and stated no doubt existed that la Office International de Hygiene Publique de Paris may communicate directly with Washington bureau as with Sanitary authorities of country adhering to Rome Convention.—*McLaughlin, Hitt.*

THE SECRETARY. The President desires to know if this Conference is in session yet at Rome.

DR. WYMAN. They are meeting this month to form the International Sanitary Bureau; they are probably in session now.

THE CHAIRMAN. Gentlemen: The cablegram which Dr. Wyman has just read to us shows the solidarity existing at this moment in all the nations of the earth to accomplish a common purpose. In order to prevent an evil, the first thing to be done is to know what it is, and the only way to detect it is through the bureaus that are established in all parts of the world. The last convention established three bureaus in order to furnish the necessary information, namely, those of Paris, Washington and Montevideo, and if the Rome conference is still in session, I would suggest that our Convention cable it, through our Minister at that capital, manifesting the pleasure of the Third International Sanitary Convention in approving the purposes of that bureau, whose aims are identical with ours. (Applause.)

Dr. Wyman has stated to me confidentially that the cablegram was not sent him officially, but I believe that it can also be said confidentially that the Convention has listened with pleasure to the reading of said cablegram.

THE SECRETARY. As was said before, the proposition of Dr. Roberts was not, by a mistake of mine, included in the report. Dr. Roberts will now read it.

DR. ROBERTS (Reading):

The object of the Conventions of the American Republics being to render uniform quarantine regulations in order to protect public health, causing at the same time as little injury as possible to commerce, and

Whereas, owing to the lack of uniformity in the bills of health issued by the different nations of America, it becomes difficult to fully understand the same because they many times lack certain details, the undersigned delegate proposes:

1. That at the next International Sanitary Congress the forms of bills of health to be issued by the nations that have adhered to this Convention be discussed and approved, in order to verify the aforesaid documents.

2. That at all ports open to foreign commerce, the sanitary authorities shall issue bills of health to all vessels applying for them, and in accordance with such model form as the next Convention may adopt.

THE SECRETARY. Inasmuch as owing to the short time we had at our disposal these resolutions were not considered by the Advisory Committee, they will now be discussed. Shall they be adopted?

(They were approved.)

The propositions submitted by the Chilean delegation and the last ones submitted by Dr. Wyman were likewise approved, and these, as well as those of Dr. Roberts, were added to the resolutions adopted and submitted by the Advisory Committee.

THE CHAIRMAN. The Secretary will now give an account of the visit we have just made to the President of the Republic, the object of which was to present the congratulations suggested by the delegate of Uruguay.

THE SECRETARY. I take pleasure in reporting on the mission which, together with the Chairman of this assembly, was entrusted to us by the Congress at the previous session relating to the congratulations which said Assembly had decided to present to the President of Mexico for the important sanitary works that have been carried out in this

country. General Diaz requested us to express his deep acknowledgment for this testimony of appreciation on the part of this Congress, and that all he had done in that respect was simply to second what Dr. Licéaga had recommended. During said visit the President of the Republic added that he would always keep as an inestimable memento the communication in which he was advised of the resolution adopted by the Third International American Sanitary Convention, and which the speaker, together with the Chairman of said Convention delivered to that high functionary on that occasion.

The delegates proposed a vote of thanks to Dr. Licéaga for the great impetus he has given to the sanitation of the ports and of the capital of Mexico, and congratulates the administration of General Diaz for the most important works accomplished along those lines.

Dr. Gutierrez Lee. I beg to submit the following proposition to the delegates:

Whereas the sessions of this Convention are about to close, and after hearing what the President of the Republic has said in praise of our illustrious Chairman, I believe that all the delegates should present a token of our respect and admiration to the indefatigable scientific-worker, Dr. Licéaga, our present Chairman. As you have already seen, his name is associated with all that progress, all those hospitals, all those centers of sanitation, not only of the Federal District, but of the whole Republic, to which he has devoted his great learning. Therefore, I propose that this Convention present a testimonial of admiration and respect to the Chairman, who honors us with his presence on this occasion. (Great applause.)

The Secretary. I have the honor to second the proposition presented by the delegate of Colombia, and to say to the Convention that Dr. Gutierrez Lee, anticipated my wishes, as I had thought before to speak on the matter, and I have now great pleasure in approving the well deserved homage now rendered to our worthy Chairman.

The proposition was unanimously adopted. (Applause.)

The Chairman. This testimony has deeply touched me, and because of this fact I can not properly express my gratitude with words; but if what I have done, which is very little in comparison with what I should do, deserves your commendation, I declare that this is the greatest satisfaction that I have ever experienced. (Applause.) I repeat my deep acknowledgment for this token of esteem to which I do not think I am entitled.

Dr. Soza. Mr. Chairman: The Chilean delegation has the great honor to state that all the sentiments expressed by the gentlemen who have just spoken are shared by all, and like the delegate of Costa Rica were about to express them. I think we should all join in this testimonial, since it is the opinion of all, and that we should sign a testimonial on parchment in order that our Honorable Chairman may keep it as a memento. In this way we would unite our testimony in a graphic and tangible manner. (Applause.)

The delegate of Uruguay as well as those of the Central American Republics cheerfully second this proposition.

The delegate of Brazil also seconded said proposition.

Dr. Wyman. The United States will yield to no one in its appreciation of Dr. Licéaga's important work. We are his nearest neighbors, and have for many years witnessed his earnest and brilliant efforts in behalf of hygiene and public health. Nowhere has Dr. Licéaga greater

admirers than in the United States, and we wish this statement to be appreciated in all that it applies, and we shall have the greatest pleasure in subscribing any document wherein said sentiments are expressed.

It was decided to appoint a committee composed of Doctors Licéaga and Ulloa to deliver to the President of Mexico the communication referring to the resolution adopted by the Convention concerning his illustrious personality.

DR. GUITERAS. The Cuban delegation approves with great satisfaction the sentiments just expressed.

DR. ESTEVES. Following the example of my colleagues, I share the sentiments expressed, always admiring the Mexican colossus.

THE SECRETARY. Dr. Licéaga gives me a mission rather difficult to fulfill. He says he is not able to answer as he should wish the sentiments expressed in his commendation because he is deeply touched, a fact which we easily realize, because all wise men are modest, and Dr. Licéaga can not be an exception. The Dr. Licéaga of the present occasion reminds me of the Dr. Licéaga whom I had the honor to meet at the Second Convention of Washington.

On a certain occasion in which, at a dinner given to the delegates by the Cuban Minister, similar remarks were made regarding him, and all he was able to do was to stand up and manifest his appreciation with tears in his eyes. Nothing could be more eloquent than those tears, which I remember very well, and can fully appreciate, what are now the feelings of our competent and beloved Chairman. (Applause.) Gentlemen: Before the close of the session, I take the liberty to request the delegates to deliver a copy of the different essays presented at this convention so that they may be forwarded to the Bureau of the American Republics to be filed. Dr. Yanes would sincerely thank you for this attention. I also wish to call the attention of the official representatives of the Republics to the advisability of suggesting to their respective Governments to put into effect the provisions which have been approved before, to the end that funds be provided for meeting the expenses that said office may incur. This matter should be taken up at once because the work of publishing the long essays relating to the proceedings of this convention would require considerable expense, and that you should also take into consideration at once the proposition of Dr. Wyman concerning the office and employees of the International Sanitary Bureau. I have a list of the nations that have already paid in full, of others that have paid in part, and of those that have forgotten to comply with this agreement. I shall not read the names, but the list is at the disposal of the delegates for their information.

THE CHAIRMAN. I beg to remind the delegates that our last session will take place today at 3 p. m.

The session adjourned.

Afternoon Session.

The session was called to order at 3 p. m. by Dr. Licéaga, Chairman, the following members having been present: Dr. Oswaldo Gonçalvez Cruz, Dr. Ricardo Gutiérrez Lee, Dr. Genaro Payán, Dr. Hugo Roberts, Dr. Juan Guiteras, Dr. Ernesto Soza, Dr. Pedro L.

Ferrer, Dr. Juan Horacio Esteves, Dr. Salvador Ortega, Dr. José Azurdia, Dr. Luis Lazo-Arriaga, Lic. José Algara, Dr. Gregorio Mendizábal, Dr. Ernesto Fernández Espiro, Dr. Rodolfo B. González, Dr. Walter Wyman, Dr. R. H. von Ezdorf, Dr. Rhett Goode, Dr. H. L. E. Johnson, Dr. J. Gatewood, and the Secretary, Dr. Juan J. Ulloa.

The Secretary requested that the reading of the minutes of the previous meeting be dispensed with and that he be authorized to prepare them later. This request was granted.

In the course of the session said minutes were discussed and approved.

THE CHAIRMAN. Before commencing the discussion of the matters comprised in the program, the Secretary wishes to present a resolution to this Congress.

THE SECRETARY. I proposed the following resolutions, which were unanimously approved:

1. That a Committee be appointed to give, in the name of the Third International Sanitary Convention, a vote of thanks to His Excellency General Porfirio Diaz, President of the Mexican Republic, for his important co-operation in the success of this Convention.
2. That a vote of thanks be extended to the Vice-President, and to the Secretaries of State, of the Treasury, and of the Interior for the kind attentions shown us.
3. That a vote of thanks be accorded to the Superior Council of the Government of the Federal District, and to the Municipal Government of this city for the kind attentions they have shown us.
4. That we sincerely thank the committee of ladies who have so kindly waited on the wives and friends of the foreign delegates.
5. That a vote of thanks be given to the Superior Board of Public Health and to the Director of the Water Supply Works of this City for the valuable services they have rendered us, and
6. That we express to the Mexican delegates to this Convention our deep appreciation of the exquisite courtesy and the splendid manner in which they have welcomed us to their country.

Dr. Wyman moved that the propositions made by Dr. Ulloa be unanimously adopted.

The Chair appointed Drs. Johnson, Gutiérrez Lee, Fernández Espiro, Ferrer, and Lazo-Arriaga, to convey to the President of the Mexican Republic the resolution approved at this session, and which refers to his distinguished person.

THE CHAIRMAN. The selection of the place for the holding of the next convention is now in order.

DR. GONÇALVEZ CRUZ, the delegate of Brazil, moved that the next convention be held in Costa Rica. (Approved.)

THE CHAIRMAN. Gentlemen: The decision that the convention has just made seems to me to be of the greatest importance; that the delegate of a country as important as is that of Brazil should have made this declaration, honors him who made it as much as it does the country from which he comes, and this is another proof that the aims of this Convention are entirely just and equitable. The most important commercial and maritime nation is not selected, but, on the contrary, the smallest of our sister Republics. I accept the resolution proposed to the Convention. (Applause.)

THE SECRETARY. Gentlemen: In the name of the Republic and

Government of my country, I sincerely thank you for the great honor you have conferred on us.

We are a small nation, but we shall see that our good-will meets the exigencies of an Assembly as important as this one is, and, above all, after conventions have been held in the United States and Mexico.

Costa Rica, gentlemen, two years hence will receive you with open arms, and although we have no lesson to give you, you will find there a reception such as is accorded to true brothers. (Applause.)

THE CHAIRMAN. This point settled, the selection of the Chairman of the Convention is in order. Permit me to suggest that Dr. Juan J. Ulloa, of Costa Rica, be chosen Chairman of the next convention by acclamation. (Approved by acclamation.) (Applause.)

THE SECRETARY. I am overwhelmed with gratitude at the distinction of which you have made me the object. Although I am large in size, I am small in intelligence and scientific accomplishments, and, above all, when I am placed side by side with the giants Licéaga and Wyman, who have preceded me in the honorable post to which you have called me.

I appeal to your benevolence and earnestly entreat you to assist me in discharging the duties of such a difficult mission, in the fulfillment of which I can only offer my willingness and the true desire of my heart to do so. (Applause.)

THE CHAIRMAN. The program shows that we should proceed to the appointment provided for in article 4 of the provisional program, but as this appointment was made this morning, we will proceed to the election of the chairman and personnel of the International Sanitary Bureau of the American Republics.

DR. FERNÁNDEZ ESPIRO. I move the Convention that the Chairman and personnel of the International Sanitary Bureau in Washington continue the same as it has been heretofore. (Applause.)

This motion was unanimously carried, and, therefore, the personnel of said Bureau is Drs. Walter Wyman, Eduardo Licéaga, Juan J. Ulloa, Juan Guiteras, A. T. Doty, Rhett Goode and Eduardo Moore.

THE CHAIRMAN. For my part I sincerely thank you for the honor you have conferred upon me in continuing me as a member of that Committee.

THE SECRETARY. I likewise desire to express my sincere thanks for this honor.

DR. WYMAN. I also wish to thank you for the honor of having been again elected Chairman of the International Sanitary Office, and to express my deep gratitude for this honor.

THE CHAIRMAN. This phrase has been placed in the program: "Designation of the authority which is to issue the invitations to that Convention." As we have already said a number of times in this Convention this reunion was born at the Pan-American Conference held in Mexico during the latter part of 1901 and the early part of 1902, and the 5th clause of that conference says:

"V. The Second International Conference of the American States further recommends, in the interest of the mutual benefit that would be derived therefrom by each of the American Republics, and that they may more readily and effectively co-operate one with the other in all matters appertaining to the subjects mentioned in the above resolutions, that a general convention of the

health organizations of the different American Republics shall be called by the governing board of the International Union of American Republics to meet at Washington, D. C., within one year from the date of the adoption of these resolutions by this conference; that each Government represented in this conference shall designate one or more delegates to attend such convention; that authority shall be conferred by each Government upon its delegates to enable them to join delegates from the other Republics in the conclusion of such sanitary agreements and regulations as in the judgment of said convention may be in the best interests of all the Republics represented therein; that voting in said convention shall be by Republics, each Republic represented therein to have one vote; that said convention shall provide for the holding of subsequent sanitary conventions at such regular times and at such places as may be deemed best by the convention; and that it shall designate a permanent executive board of not less than five members, who shall hold office until the next subsequent convention, at which time the board shall be appointed with a chairman to be elected by ballot by the convention; that said executive board shall be known as the 'International Sanitary Bureau,' with permanent headquarters at Washington, D. C."

It has been customary for the Bureau of the American Republics to call the Convention, and that was the method adopted with regard to the first two conventions, and no objections were made, but since the Convention had to meet out of Washington, then the departments of foreign relations of all the Republics made the following objection: That there was no doubt as to the authority the Bureau of the American Republics had to make the call, but that it seems an act of national courtesy that the Republic in which the convention was to be held should issue the invitations, and for this reason it will be remembered that the Mexican Republic issued the invitations to this Convention through its Department of Foreign Relations.

Inasmuch as our purpose is that all our decisions shall be of a practical character, I would beg to request you that the Bureau of the American Republics make the call, and that, in addition, the Government of the country where the Convention is to be held issue an invitation through its department of foreign relations to the several countries represented.

DR. WYMAN stated that this was the desire of the convention.

DR. JOHNSON seconded the motion.

DR. LAZO ARRIAGA. I entirely agree with the motion of the Chairman, and would like for all of us to adopt it.

THE CHAIRMAN. This matter having been decided, and as no one wishes to make any remarks to the contrary, I would like for the Convention to fix the date of the meeting of the next Convention.

THE SECRETARY. I suggest, Mr. Chairman, that on considering the date the Convention is to be held and on deciding the same, a date as close to the 25th of December as possible should be chosen, because that is the best season of the year in San Jose, with the advantage that, after the work of the Convention is over, the delegates may enjoy the civic festivities which will take place in said city on the 30th and 31st of December, and the 1st of January.

THE CHAIRMAN. Inasmuch as the duty of this assembly is to fix only an approximate date, it devolves on the Bureau of the American Republics to fix the precise date, with the approval of the new Chairman. I believe that the resolution could be worded in the following manner: "To be held in December, 1909."

If no one wishes to make any remarks, we shall consider this resolution approved. It was approved.

Let us now carry out the last part of our program.

I have the pleasure, gentlemen, of announcing to you that the next person who is entitled to the floor is Dr. Gonçalvez Cruz, delegate of Brazil, a very modest gentleman, whose merits I refrain now from stating, fearing that he would be embarrassed thereby. Still, I will say that in sanitary matters he occupies one of the first places in Brazil, and I have the greatest pleasure in introducing him to you, if such introduction is necessary, since he has an international reputation.

Dr. Gonçalvez Cruz. Mr. Chairman and delegates: On leaving you today, I feel it my imperative duty to express my acknowledgment to this hospitable and progressive country for the kind and fraternal reception accorded us.

I congratulate myself and all my colleagues on the many advantages derived from the exchange of views that we have experienced here, and which all of us will carry with us to our native countries, contributing in this joint manner to a unity of views and agreement in all matters relating to sanitation.

I shall always retain the most pleasant recollections of these few days, and Brazil is deeply indebted for the kind and courteous attentions of each and every one of the members of this assembly.

Nothing could describe the eloquent and brilliant manifestations accorded the learned President of the Supreme Board of Health of Mexico, and to our esteemed Chairman I bring the homage of deep gratitude for the paternal, kind and able manner in which he has directed our work, and who has encouraged us with his example of untiring diligence. My esteemed colleagues, I bid you farewell.

The Chairman. I have the honor to introduce to you Dr. Ricardo Gutiérrez Lee, representative of Colombia. He has been our companion in all our work of this kind. He is one of the most enthusiastic members in sanitary matters, and since he would not make any remarks, I did not wish to deprive myself of the satisfaction of informing you that I have known him for a long time, not only as a distinguished gentleman, but also as an able member of our conventions.

At the same time I have the pleasure to introduce to you Dr. Payán, who is the Benjamin of this Congress, and who has already shown us his great ability in his report.

Dr. Payán. Mr. President and Delegates: I am deeply grateful for the kind words of the Chairman.

In the name of my Government and in that of the Colombian Delegation, I have the great honor of expressing our deep gratitude to the Mexican Government and Delegation to the Third International Sanitary Convention for the constant proofs of sympathy shown us, thus rendering more lasting, if that could be possible, the pleasant remembrances which all of us shall keep of the pleasant days we have spent in this beautiful capital of this great Republic where we have seen a true progress and over which floats as a halo of peace, the illustrious figure of General Diaz.

I would also express my acknowledgment to the distinguished Chairman of our Convention for the kind manner in which he has treated us. We have seen this morning that the nations of the American con-

tinent here represented gave him a testimony of their admiration, which he well deserves because of his great work in behalf of the progress of his country, and when the continuation of the Pan-American Conventions was proposed, he pointed out the best way of uniting all the peoples of this Continent.

Concerning this matter I believe that if we have not entertained a more favorable opinion of ourselves, it is because we have not known each other well enough. If we have not made ourselves understood mutually, it is because the isolation in which we have lived has not permitted us to banish the prejudices and discover the capability and good faith that obtain among us. By our mutual intercourse we discover that from all points of view our opinions are not widely different, much less indeed than we suspect. A better understanding, and a greater and clearer conception of our mentality and moral purpose, is what those who aspire to the creation of Panamericanism, that is to say a true Pan-American solidarity, should endeavor to bring about. (Applause.)

THE CHAIRMAN. I have the honor to introduce to you a person who needs no introduction to this assembly, Dr. Guiteras, of Cuba. The name of Dr. Guiteras is so closely associated with our work in the sanitary congresses, and with this Third Convention, that, as President Diaz said, when I introduced Dr. Guiteras to him, "his name is well known in connection with the doctrine of the transmission of yellow fever." Indeed, if Dr. Guiteras has not so many qualifications which entitle him to the respect of the scientific world, and of the whole world, it would suffice for him to have associated his name with the great discovery which has completely revolutionized the knowledge we had concerning yellow fever.

DR. GUITERAS. I am exceedingly grateful for the kind congratulations from Dr. Licéaga, and Dr. Roberts will take the floor to bid farewell to our colleagues.

THE CHAIRMAN. I congratulate myself on my mistake, because thereby I will have the pleasure to say publicly what I have said in private. Dr. Roberts also deserves great credit; he is the Chief of the Sanitary Service of Cuba, and has shown us his great learning both in the part he has taken in our discussions, and in the propositions he has submitted, all of which are eminently practical.

DR. ROBERTS. Mr. Chairman: It is the duty of every civilized man to do all that he possibly can in behalf of his fellow beings, and this being the mission that has brought about our meeting, we ought to be satisfied for having endeavored to contribute, with the greatest enthusiasm, in carrying out our great purpose. I sincerely wish that the ties of union established by this Convention among all the nations of America, to which Mexico has greatly contributed, may be closer every day, and that this union may prove to be the foundation of a fraternal feeling among all the people of the New World.

THE CHAIRMAN. Dr. Juan J. Ulloa, another gentleman who is unknown to you, will now have the floor. This unknown gentleman is one of the veterans in sanitary works, from the time we earnestly undertook such work, and he has shown his constant desire that these conventions may not be given up, and, in addition to his scientific at-

tainments, and which he disowns through modesty, he possesses a proverbial kindness, and will therefore constitute a true bond of union for future congresses, especially now that he has been elected Chairman of the next convention that will be held in San Jose de Costa Rica.

THE SECRETARY. Before beginning my remarks, let me embrace my old friend and distinguished teacher, Dr. Eduardo Licéaga. Being about to leave this noble and progressive land where we have been shown so many courtesies, and where we have been treated in a royal manner, I, in the name of Costa Rica, and of its government, sincerely thank the government of His Excellency, General Diaz, I thank the learned descendants of the brave Aztecs, the government of the Federal District, and our colleagues the delegates of this enlightened country.

May the progress which has been so rapidly made in Mexico, continue its forward march until the sister of which we are proud is lost sight of in the splendid horizon of the 20th Century. Farewell, my dear colleagues, until we meet again; when you arrive in the bosom of my country, I shall have the pleasure of according you the most cordial welcome. (Applause.)

THE CHAIRMAN. Gentlemen: Dr. Ferrer, delegate of Chile, has kindley consented to make some remarks. Though he is young, as you see, he has already attained eminence in his profession, and is well known not only in his country, but in all America, and I take great pleasure in introducing him to you as one of the prominent men of his Republic.

DR. FERRER. Mr. Chairman and Delegates: The Chilean delegation on taking leave of the Convention assures to the Mexican nation its most genuine and cordial support, and thanks His Excellency, General Porfirio Diaz, President of the Republic, for his kind and benevolent observations made concerning our country, and expresses to the Honorable Chairman of the Third International Sanitary Convention of the American Republics, Dr. E. Licéaga, its most respectful and sincere sentiments of admiration at the excellent manner in which he has fulfilled his scientific duties, the discreet way in which he presided over the proceedings of this Convention, and, above all, at his goodness of heart and his spirit of fraternalism to each and every one of our colleagues.

It is most gratifying to the Chilean Delegation to grasp the hands, on this solemn occasion, of its colleagues of the American Republics, manifesting to them the solidarity of our sentiments in our difficult tasks, and to acknowledge that the highest confraternity, the calmest discussion, and the most noble spirit of American union has always pervaded this atmosphere.

THE CHAIRMAN. The representative of Ecuador, Dr. Esteves. I regret very much that I should not have had occasion to learn of his excellent attainments, but his innate modesty has constantly obscured them. Nevertheless, from private conversations had with him, I am convinced of his nobleness of spirit, and of his desire to carry the work of the Convention to a successful termination.

DR. ESTEVES. Mr. Chairman: The Republic of Ecuador, which hastened to accept the invitation of the Mexican Government to

attend the Third International Sanitary Congress, has again manifested on this occasion its desire to offer its modest contingent to all that tends to more closely unite the American Republics, not only with respect to their political relations and diplomatic friendship and good-will between the Governments, but also in all that signifies progress, reciprocal usefulness, the interchange of views, and the application of general rules to the welfare of the Continent.

You will remember that the first convention dealt almost exclusively with hygienic questions, and in this matter it is an honor for me to accept your authorized opinions for the purpose of proclaiming at your side the supremacy of hygiene over medicine—notwithstanding our professional partiality—as, even in the judgment of learned military leaders, the humanitarian provisions suggested with the object of regulating and civilizing war, and the generous efforts that civilized nations have made to avoid strife, are likewise preferable in matters relating to warfare.

One of the positive advantages of sanitary congresses is that it can be said of them that all their members are of accord beforehand, and no essential difference can arise in the estimation of the methods that it is fitting to adopt, for the purpose of efficiently combating the most terrible and sanguinary enemies of the human species. Innumerable benefits having already been obtained in the union of 27 nations under the provisions of one Sanitary Code, and it being logical to hope that the fraternal, farseeing and redeeming propaganda is not to be stopped within the limit already reached, a day will come when unjust prejudices will be banished and difficult obstacles swept away by universal union under one flag—the flag of Science for the Health and Life of Men—that could easily cover all the countries of the earth as well as the realms of heaven.

The eloquent examples that you have cited relating to the wonderful success obtained in Mexico in the extirpation of yellow fever, as well as a comparative review of the ravages of the plague in India, the almost barren results of the recent invasion of the cholera in Europe, and the prodigious effect of the antiseptic system used by the Government of the United States in Habana, show in the most conclusive manner how certain are the truths you have established as to the immense benefits of hygiene, and how much more efficacious is the sanitation of towns at the present time than was the ancient and odious regime of quarantines that will soon be abolished everywhere.

We can now congratulate ourselves that the provisions of the Convention of Washington of 1905, which have been in force in Ecuador, should have been unanimously accepted, with slight modifications, by this conference, and it only remains for us to desire that these provisions be the basis of a code of international sanitary police regulations in all the countries of the New World.

I am pleased to acknowledge that the agreements of this Convention are of undeniable importance and are worthy the high purpose that caused us to assemble here, and I promise that they shall be faithfully observed by the country that I represent.

In conclusion I am deeply indebted to the Mexican Government and to you for the kind reception you have given me, and I now convey to the Government and people of the United States of Mexico, the

friendly greetings of the People and Government of Ecuador, and avail myself of this opportunity to publicly express the cordial feelings of admiration and respect which General Eloy Alfaro, President of the Republic of Ecuador, entertains for the illustrious General, Porfirio Diaz, whom the whole world admires for his statesmanship as well as for his civic virtues.

THE CHAIRMAN. Dr. Azurdia is not only one of the most distinguished physicians of his country, but also a well known poet, having shown his great attainments whenever he has had the floor; but what renders the presence of the Guatemalan Delegation of the utmost importance is the spirit of confraternity that it has constantly shown ever since we commenced to hold our sessions, and the great clearness of its views in the matters in which it has taken part. Therefore, I take pleasure in introducing to you Dr. Azurdia, who will now have the floor.

DR. AZURDIA. Mr. Chairman and Delegates: We shall leave this Capital, but the memories of this Convention will remain indelibly engraved in our minds and hearts as an event of the utmost importance. In our minds, because of the comprehensive scientific work carried out in sanitary matters in the ports and cities of the Republic of Mexico. We had occasion to admire the General Hospital which can compare favorably with the best hospitals of the world, the water supply works of this city, expensive and magnificent, the important system of sewerage and drainage, and the institution devoted to the rehabilitation and moral improvement of criminals, namely, the beautiful penitentiary of Mexico.

We have had also occasion to admire the means of communication, the great commerce, the wonderful industries developed at Rio Blanco in the weaving and spinning mills, the great general progress in all the spheres of human activity that is being carried out in the Republic. And, consequently, we have realized that such results obtained from science when applied to hygiene, have in Dr. Licéaga an untiring director, as those which the nation, as a whole, has obtained in complicated economic-administrative affairs, have their ablest representative—their alma-mater—in the President of the Republic. On the other hand, thanks to the gallant courtesy of Dr. Licéaga, we have also been able to admire, not only the flowers which with immense profusion embellish these beautiful fields, not only the panoramic views of this unique valley, but also the fire of the eyes of the beautiful Mexican ladies whose magnetism has entirely fascinated us.

And add to all this, gentlemen, the work of the Convention, which will doubtless be beneficial to all America, has shown us that the solidarity of the people of the New World so far as ideals, aspirations and sympathies are concerned is a possible and real fact.

In a word, is it, perchance, necessary to speak of hospitality in a sister republic, wherein prevail the same tendency toward progress, advancement and education as those which obtain in my beloved Guatemala? Why should we speak of hospitality in a country like this universally known for its nobleness, beautiful because of the learning of its men and the refinement of its social circles? We will soon meet again, gentlemen. Tomorrow—in August of next year—we shall hold in Guatemala the Fifth Pan-American Medical Congress,

and, soon after, the Fourth International American Conference in Costa Rica. The Delegates of Guatemala do not say farewell, we give you a hearty greeting, humming an American hymn of loving confraternity to Dr. Licéaga, Chairman of this Convention, and to the President of the Mexican Republic.

Gentlemen, we will not say adieu because the Government and people of Guatemala, who sent you their affectionate greetings at the beginning of your labors, anxiously waits for you to receive you with open arms.

THE CHAIRMAN. I hope that Dr. Wyman, as representative of the United States, will favor us with some remarks. Indeed it is unnecessary for me to introduce General Wyman, since no person is better known than he on the whole American Continent. The work he has undertaken, and which he has carried out in his country, the great benefits received not only by his native country, but by all the other countries of the American Continent, but the great knowledge he has in matters relating to public hygiene and the wonderful organization of the services he has rendered to his country, are really prodigious, and the progress made by the Marine Hospital Service is equally worthy of credit. These facts go beyond anything we can measure with ordinary understanding, inasmuch as the work he has accomplished belongs to a century rather than to a short period of time. I take pleasure in expressing publicly on this occasion my admiration for Dr. Wyman, who will now take the floor.

DR. WYMAN. In glancing over what has been done this last week, I believe that the International American Sanitary Convention has lost nothing of its vigor, purpose, and ability to do things, but that in all these things they have been increased by the deliberations of the Convention which is now about to close.

The first Convention, which was held in Washington five years ago, announced some principles on which we all agreed, and also established feelings of good will among the delegates.

All this prepared the way for the important event of the second convention, which was held two years ago, and furnished us with a concrete proposition, namely, the Convention which was proposed to our respective governments.

This Convention prepared some rules which should serve as a guide for all the republics in the treatment of bubonic plague and yellow fever, which have already been recognized as international diseases. Almost all of the Republics have adhered to this Convention by formal approval or ratification. And now at this Convention we have discussed and prepared in concrete forms some additional sanitary provisions which being the formal and unanimous expression of all the republics ought to be of unquestionable value in the years to come, serving as the star which shall serve as a guide in the voyage of the several republics towards a perfect port of hygiene and sanitation. But again, in compliance with the instructions of the Third Conference of the American Republics held at Rio de Janeiro in 1906, we have taken measures tending to establish a practical method of bringing perfect sanitation to our ports. We can not, at present, affirm that we have prepared a Convention which shall serve as the basis for the purpose in view, but we have authorized the International Sanitary

Office to take this matter into consideration, and in accordance with a resolution, all the delegates know that this will be one of the questions which will be taken up and considered at the Fourth Sanitary Convention, which will be held within two years in Costa Rica. An International Convention concerning such sanitation of the port as would prevent the plague from spreading, a disease which after it is developed spreads through all the arteries of commerce, is, doubtless, a great sanitary step forward, which would be in consonance with the feelings of modern fraternity among nations. This week has been full of practical lessons, which we have received from this glorious Republic of Mexico—lessons both of humanitarianism and in matters relating to public health. We unanimously say, well done, Mexico, well done, Licéaga.

From a social point of view it is very difficult for us to be able to express properly our gratitude for the great hospitality and exquisite courtesies shown us—all this kindness and courtesies have left lasting remembrances in all our hearts, and in view of these pleasant entertainments, we, the foreign delegates, have been able to become better acquainted with each other, and have formed ties of friendship which will endure as long as we live.

Mr. Chairman and gentlemen: It seems to me that this beautiful group of flags displayed behind the seat of the Chairman, showing the colors of all the Republics, conveys an exact idea of our present situation with regard to our international sanitary conventions. Those flags are in a group the motto for which consists of two words: "Peace and law!" What a noble aspiration is expressed in these two words, and how well they harmonize with the purpose of our Convention!

The brilliant colors of these flags are a symbol of beauty and power. The white color is found in those flags to symbolize the purity and the absence of selfishness in our purposes; the red symbolizes the earnestness with which we endeavor to carry out our ideals; the blue reveals our loyalty and our constancy toward the observance of our principles, and all these colors are grouped to form one single flag or symbol. Such is our situation today. May it so continue for a long time. If the future sanitary conventions are inspired by the same fraternal feeling, and by the same harmony of action and aims that have been shown in the first and second conventions, and now in this third one, then I am sure that the American Republics and the whole world will have reason to congratulate themselves on the good results which will undoubtedly be obtained because of them.

Dr. Goode. We have experienced great pleasure during our brief visit to this great and beautiful city of Mexico. The Mexican ladies are as beautiful as they are kind, and the cultured gentlemen we have had the honor and satisfaction of meeting are perfect types of the Mexican race.

Mankind will derive great benefits from the work of the Third International Sanitary Convention, and to our Chairman, Dr. Licéaga, we are indebted for the success of this Convention and the happy hours we have spent here.

The Chairman. Dr. Lazo-Arriaga, Delegate of Honduras, whose personal attainments I had occasion to appreciate during the short

moment which our official work left at our disposal, and whose personality I greatly admire, will now address you.

DR. LAZO-ARRIAGA. I want to unite my voice to the choir of praises concerning our dear and learned Chairman, and also to thank the enlightened Mexican Government and the distinguished representation of the city who have co-operated to the end that our stay in this beautiful Capital of Mexico may be more pleasant.

If we ever had a reason for remembering a beautiful city, where, in addition to the work of man nature had prodigally contributed to its embellishment, and where to this is added the great beauty of her daughters, we would assuredly point to Mexico.

Before saying farewell to you, I desire to thank each and every one of you both for the courtesies which, as representative of Honduras, you have shown me, and for having appointed as the place of meeting of the next Convention one of the Central American Republics. As a Central American I am deeply conscious and grateful for this honor.

THE CHAIRMAN. Dr. Mendizábal, our countryman, is the representative of Nicaragua, and I hesitate to say anything in his honor because my love for him is such that it might be construed that anything I said about him was due to my friendship for him and not because of his real personal merit, but I am compelled to introduce him to you as one of our men of science who have worked most in the different branches of medicine, and who, at the same time has been not only the physician but the friend of all his patients, and who, on the other hand, has been one of the pillars of all the scientific works of the society to which he belongs. He is very well known among us and I sincerely wish he should be equally well known among you.

DR. MENDIZÁBAL. Above all allow me to express my gratitude for the kind and affectionate words—which I don't think I deserve—of my dear friend Dr. Licéaga, inspired by a good and old friendship of 40 years of work and which can never be broken.

Allow me also, gentlemen, since we have finished our task, to congratulate myself in the name of the Republic of Nicaragua, which I have the honor to represent here, and to congratulate ourselves for the success attained by this International Sanitary Convention, inasmuch as the work which has been done will bear good fruit and be beneficial to the future.

Allow me also to thank the representatives of the Mexican Republic, its President and people for the innumerable courtesies they have shown to all the delegates during our short stay in this country, and allow me also to congratulate this people, as has been done before, for their progress which we knew only by name, and which we are now practically acquainted with because we have seen pass before our eyes millions of dollars which the Mexican Government has spent in carrying out one of the most beneficent measures—that concerning public health. For this reason, the Mexican Government is entitled to be further congratulated.

Allow me also to fervently pray that Providence, who has endowed Mexico with a splendid government, may prolong for many years the life of its Chief Executive and may also prolong that of his right-hand man in sanitary matters. Dr. Licéaga has been wisely selected by General Diaz to direct all the men who will have to help him in his grand work of progress and peace.

I beg to congratulate all the delegates of the sister republics for the magnificent work they have brought to us thus pointing out to us and conveying an exact idea as to the work they have done and are doing in those republics, and how they have struggled in behalf of health and the preservation of life.

We already know this because we have just returned from a trip to South America, where we had gone especially to call the attention of the Argentine Republic, Brazil, Chile, Peru, etc., to the great benefits to be derived from perfect hygiene. Some of these countries were not entirely unknown to us, and we have just had occasion to see that they follow the same course, the same methods, and that all of them are looking after the health of their fellow citizens.

Finally, gentlemen, before we say farewell, for a short time, since we are soon to meet again, if life and health so permit, to express the desire that all my colleagues, upon returning to their respective countries may find their homes as they left them—where we are always happy—and that they may reap the reward of their efforts. I pray that their countries may continue to prosper and progress, so that they may reach, without any obstacle, the goal of their greatness, which they doubtless will attain, inasmuch as the people of the world discovered by Columbus, seem to live in the land selected by God for the development of all the blessings of liberty.

Be ready, gentlemen, to erect a throne (don't get frightened at this word which frightens many American nations), get ready to erect a throne to the great goddess before whom we all bow, the goddess before whom all civilized nations kneel down—Hygiene. All the impulses of civilization come to us from the Old World. Let us work so that America may be the worthy throne of civilization sent to us by that Old World, and let us retain it here forever, lest disheartened, it may return again to India from whence it came.

Gentlemen, I wish you much happiness, and that everyone of you may be entirely happy in your homes.

THE CHAIRMAN. Dr. Rodolfo González, Delegate of Salvador, will make some remarks. Dr. González is a countryman of ours, and has established himself in Salvador where his merits have been recognized, and where he has been given a high place in the army. He has had great experience in matters relating to public health. I mention this fact because I am proud of it.

DR. GONZÁLEZ. Those who, like myself, knew Mexico 25 years ago, and return to it now, find that where ponds formerly stood are now streets of asphalt; that at points that were formerly foci of infection hospitals or sanitariums are now to be found; that all the branches of public health are so well administered that if Mexico continues in this way, it will become, owing to the untiring energy of Dr. Licéaga, a place where good health will be epidemic. (Applause). All this, gentlemen, is due, undoubtedly, to the wise administration of General Diaz, and to the great ability of Dr. Licéaga, who is everywhere, who sacrifices himself, and who employs in work in behalf of mankind the hours which we devote to the family, to quietness and repose.

With patriotic philanthropy and abnegation he never counts the hours of work, nor does he measure the hours of repose, because he devotes all his time for the benefit of others, even at the risk of sacri-

ficing his own health and interest. I fervently pray to God, with the true faith of a believer, to preserve the life of men such as he who now directs the destinies of the Mexican Nation, and of all his illustrious co-workers, including Dr. Licéaga, of course, in the Department of Hygiene, and which is an honor to the nation and a benefit to mankind.

In the name of the Government of Salvador, I promise this convention that I shall fulfill all the promises I have made here concerning hygiene. (Applause.)

THE CHAIRMAN. Gentlemen: Uruguay is represented here by Dr. Ernesto Fernández Espiro. It is only three days since we met him—at least the majority of us—and we have already discovered in him a man of lofty ideals, of deep learning, of much foresight concerning public health, all of which will not only be beneficial to his country but to all the American republics.

DR. ESPIRO. Mr. Chairman and delegates: I must first express my thanks for the kind and unmerited words just spoken by Dr. Licéaga, as well as for the courtesies shown me since my arrival at this splendid and beautiful Capital, which progresses continually, solving without delay some of the most important and far reaching problems of hygiene.

I do not know whether it will be my good fortune to return here, I do not know whether I shall have the opportunity of again shaking the friendly hands that have been extended to me on this occasion, but be that as it may, I shall always retain a pleasant remembrance of the happy and tranquil days that I have spent under this beautiful sky and in the radiant light of the Mexican sun—all those days in which I have shared with you the tasks of a common work, and in which we have united all our efforts and glory in the highest, the noblest, the most civilizing and humanitarian work.

Friends, companions, and delegates, with the same affectionate and cordial words with which I had the honor to greet you on my arrival here, I now take leave of you in the hour of parting.

THE CHAIRMAN. Delegates: The final part of our program requires me to say something in answer to your words of farewell, but I can not adequately reply. I took some notes during the meeting for the purpose of making a resumé of what has been said, because it seems to me that the Chairman of the Convention should do this, but in spite of this fact I can not fulfil this part of my duties. I tried to do so, and here is the raw material, but, I repeat, I have not been able to make the resumé, because I have not had time to do so. I regret very much that the last part of the program can not be carried out.

But if I was not able to do that which it was planned that I should do, I am going to take the liberty of reminding you of that which was formerly done.

Common sense, which continues to be the guide of humanity at the present time, has caused purely theoretical conceptions of purely speculative ideas to pass into the realm of the practical. In former congresses, scientific as well as other kinds, the best aspirations, the most perfect ideals of humanity were discussed, but after the meetings were over, each delegate carried away the impressions of the beautiful phrases, of the lofty thoughts, of the superior intelligence of the ora-

tors, but with the hope that that which had been considered could be realized at some future time. We also have good orators, as you have just heard, such as, for example, Drs. Espiro, Azurdia, Lazo Arriaga, Gonzalez and Mendizabal, and the only difference between the men of that time and those of today, is that the former thought properly but did not act, while the latter not only thought but acted properly. This is not optimism nor an illusion.

It is not more than six years since the Second International Conference of American States met here, and during the last days of its sessions—January 29, 1902—it approved a resolution on international sanitary police in conformity with the clause that I have just read. It was agreed that within a year from that date a Sanitary Convention composed of delegates from the sanitary bureaus of the American republics, should meet in Washington. The promise was fulfilled, the resolutions having been adopted on January 29, and the first meeting held on December 5, 1902. The results of the first meeting were very important, because then, for the first time in a scientific congress of an international character, very important declarations were made concerning the transmission of yellow fever, which was well known to the majority of physicians, but which, up to that time, had received no official sanction.

Subsequently the first conference in Santiago de Chile could not take place, but the second conference was held in Washington from the 9th to the 14th of October, 1905, in which great activity was shown, resulting in the preparation of an international treaty—because the Sanitary Convention (Treaty) of Washington, although identical with that of Paris, nevertheless, had to add the part concerning yellow fever, which was only announced in the Convention of Paris. I repeat, six days were only necessary in which to celebrate an international treaty! This work seems to me to be of great importance, as were the other resolutions which were adopted. The motion made by Dr. Wyman concerning the collection in a single book of all the resolutions adopted at the previous conventions, means that in future we shall have a Code which covers the better and larger part of the knowledge that has been acquired on public hygiene.

The Third International Sanitary Convention was held in turn and in due time. It is flattering for me to say that the part concerning hygiene, and that contained in resolutions adopted by the Pan-American Conference have been successfully carried out.

The work we have now done can not be properly understood for some time to come, but matters which most interested all of us were treated, and have been put into effect with great precision.

An interesting fact is that all the delegates who have come here were prepared by their scientific knowledge to inform us of the results of their experience. There have been resolutions such as those relating to tuberculosis, that when they were given to Dr. Soza he had only to formulate them because they had already been well studied. This proves that the work is bearing fruit, and that it is easy to do when there is a will to do it. For these reasons it can be deduced in an entirely practical manner, that the union of the American nations is being effected.

This lack of discrepancy in all the matters that we have treated, this simplicity in the manner of discussing them, removing from them every aspect of ostentation and vanity, this persistence in arriving at correct and practical conclusions is the most important proof of the benefits that meetings of this class bring, not only to the peoples of America but to all mankind.

I congratulate myself that Mexico should have been selected for the holding of this Convention, and that her invitation has been accepted by 13 American Republics; I congratulate myself in my name and in that of my Government, for the courtesies that we have received from you, and I have no words with which to sufficiently express my gratitude.

Gentlemen, let this proof of confraternity which is presented to the Third International Sanitary Convention of the American Republics, be a pledge that in future these meetings shall be more numerous, and that they will be attended not by a certain number of republics, but by all of the republics of the Western Hemisphere.

I wish that in those pleasant impressions which you say you will carry away with you, and which is so gratifying to me, you will see the sincerity of the intentions that inspires the Mexican delegation. (Applause.)

Among the resolutions proposed by the Secretary of the Convention is one referring to the appointing of a committee to convey to the President of the Republic the thanks of the Convention for his courtesies to it and for the valuable assistance rendered it. The committee is composed of Drs. Fernández Espiro, Wyman, Lazo Arriaga, Ferrer, and Gutiérrez Lee. Gentlemen, farewell.

The session adjourned.

APPENDIX

THIRD INTERNATIONAL SANITARY CONVENTION.

FEASTS AND SOCIAL FUNCTIONS IN HONOR OF THE DELEGATES.

The courtesy and splendor with which the foreign delegates were received in Mexico by the National and Federal District Governments, by the Supreme Board of Health, and by the Mexican Delegation to the Conference, were indeed most notable.

In the afternoon of the 3rd of December we were cordially received in the National Palace by His Excellency General Porfirio Diaz, the President of the Republic. In the night of the 4th we were tendered an informal reception at the Department of Foreign Relations, at which occasion, on account of the illness of Señor Don Ignacio Mariscal, the Department was represented by Señor Don José Algara, whose unexpected death we now mourn profoundly. After a delicious tea the delegates were presented with an artistic gold medal, representing the Pan-American Union and bearing the following inscription: "Third International Sanitary Convention, Mexico, December 2 to 7, 1907." At the same time Dr. Eduardo Liceaga presented each delegate with a gold Aztec calendar, with the Mexican colors in the pin from which it hung.

On the night of the 2nd a magnificent banquet was given us in the Municipal Palace by the Government of the Federal District and the Supreme Board of the Municipality of the Capital. The abundance of flowers and lights with which the Municipal Palace was ornamented offered a most wonderful view. The banquet was presided over by Don Guillermo de Landa y Escandon, Governor of the Federal District, who delivered an eloqueut speech to which Dr. Pedro L. Ferrer, of Chile, replied in the name of the foreign delegates.

In the morning of the 3rd we made a visit to the Penitentiary of the Federal District, where we were cordially received by the Director of the institution, Don Octaviano Liceaga. The conditions of safety, hygiene, comfort and discipline prevailing in the Penitentiary were justly praised by the delegates.

In the afternoon of the 3rd we were tendered an automobile ride to the Castle of Chapultepec, where we had occasion to admire the exquisite taste displayed in the furniture and ornaments of the different apartments. After visiting this sumptuous edifice and taking a ride through the beautiful park that surrounds it, we stopped at the Café de Chapultepec, where a tea was tendered us, beautiful ladies of the society of Mexico honoring us with their company.

In the afternoon of the 4th we visited the magnificent new Post-Office building, which adds to its beautiful architecture all the necessary elements for the good administration of so important a branch of the Government. Engineer Don Norberto Dominguez, Director-General of Posts, received us most courteously and presented us with a luxuriously printed pamphlet describing the new building.

After the sessions of the 4th we visited the offices and dependencies of the Supreme Board of Health; we had occasion to see the complete equipment of stoves, pumps, disinfecting apparatus and other instruments used in the splendid sanitary service of the Federal District. Taking into consideration the recognized ability of Doctor Liceaga in sanitary matters, his progressive ideas, his indefatigable activity, the fitness of his subordinate employees, and the well-merited trust that the Government of President Diaz has placed upon him, one can easily explain the great progress achieved in Mexico during the last years in all that tends to the improvement of Public Health.

In the night of the 4th a concert in the Arbeu Theatre was given in honor of the Delegates. The theatre was beautifully decorated, and the attendance was large and select; the musical program was wonderfully executed by the artists that participated in the concert.

The 5th was spent in an excursion to Xochimilco, where we had opportunity to admire the great Water Works, nearing completion, that will supply the city with pure water. We were received by Engineer Marroquin Rivera, Director of

the Works, thanks to whom we were able to appreciate that remarkable plant. From Chapultepec we were taken in an express train to Xochimilco. At 1 o'clock in the afternoon a splendid banquet was served in the open air and under an arch made of tree branches, palms and flowers. This banquet was rendered most charming by the presence of the beautiful ladies that attended it and by the melodies played by an excellent orchestra. Dr. Liceaga presided over the banquet and delivered a speech with the eloquence that characterizes him, and, at the request of the delegates, Dr. Azurdia, of Guatemala, thanked Dr. Liceaga in their name. At half-past two we sailed around the lake in big canoes that were richly decorated, and thus was ended one of the most pleasant excursions.

In the afternoon of the 6th we took an automobile drive to the Juarez, Roma, and La Condesa colonies, as the new suburbs are called. In the same afternoon we visited the General Hospital of Mexico, a large and elegantly built institution which fills all the modern requirements. Its system of pavilions, the extent of its site, its good ventilation, perfect hygienic conditions, and magnificent administration place it among the first in the world.

Afterwards we went to inspect the Pumping Station and Sewer-cleaning plant, magnificent institutions which are classed among the best of the sanitary works of Mexico.

On the 7th, at 8 o'clock in the evening, we were tendered a splendid farewell banquet by the Mexican Delegation, which took place in the "Salones Sylvain." This banquet was attended by the Assistant Secretary of Foreign Relations, representing the Secretary who was ill at that time, the United States Ambassador, the Minister Plenipotentiaries of Spain, Italy and Belgium, the Charges d'Affaires Guatemala and Salvador, several foreign consuls, all the Delegates to the Convention, and several representative gentlemen. Dr. Liceaga offered the banquet with a well-worded toast which he closed saying: "I drink, gentlemen, to the personal prosperity and to the health of your chiefs executive, to the prosperity of the nations represented in this congress, and that the inhabitants of the whole universe may consider themselves as one single nation in all that relates to the preservation of human health, or to the achievement of universal peace." Dr. E. Fernandez Espiro, of Uruguay, responded to the toast of Dr. Liceaga, in the name of all the delegates, and closed his remarks drinking to the health of the President of the Mexican Republic and Doctor Liceaga. Then, Señor Licenciado José Algara, Assistant Secretary of Foreign Relations, spoke in the name of the Mexican Government, and praised the progress of modern hygiene, the scientists that were honoring Mexico with their presence, and Dr. Liceaga.

My colleagues of the Convention honored me with the pleasure of answering to the official toast of the Assistant Secretary of Foreign Relations. After congratulating the Mexican Government for the progress achieved in the country thanks to its well-directed efforts, and the activity it had displayed in the work that now speaks so highly in its favor, and after making special mention of the remarkable impulse which had been given to sanitary works, in the ports as well as in important cities, principally the capital, I closed my remarks drinking to the health of President General Porfirio Diaz and his officials, who fully realized the importance of the improvement of public health; to the welfare of the noble nation that had received us so splendidly; to the health of the Mexican Delegation, whose attentions to us had no bounds; and to the health of the illustrious Mexican, the eminent Doctor Liceaga, our chief, teacher and friend.

Upon the closing of my remarks, I had the pleasure of fulfilling the mission with which my colleagues had entrusted me, placing in the hands of Dr. Liceaga a copy in parchment, signed by all the Delegates to the Convention, of the resolution in which is stated the appreciation and recognition that we all felt towards him for the most valuable services he has rendered his country, and in which a tribute of respect and admiration is paid to the distinguished hygienist of Mexico, glory of the medical profession of the American Continent.

Finally, it is my pleasant duty to express in the name of all the delegates our sincere appreciation for the many attentions that were accorded to us in Mexico, and to the persons who honored us with social functions, making special mention of Doctors Liceaga and Monjarras and their families.

New York, November, 1908. (Signed) JUAN J. ULLOA.

THIRD INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS.

MEXICO, December 6, 1907.

MR. PRESIDENT:

We have the honor to inform you that at the session held yesterday by the Third International Sanitary Convention of American Republics the Honorable Delegate from Uruguay, Doctor Fernandez Espiro, made the following remarks:

> I have listened with great pleasure to the report that has just now been read by the President of the Convention, regarding the works of sanitation that have been carried out in the Mexican Republic, and, if all the delegates here present agree with the motion, I would propose, in their name and in my own, that a resolution be adopted expressing the gratifying impression that the reading of that report has afforded us, and that a copy of the said resolution be forwarded to the Government of Mexico, through Honorable Doctor Liceaga, President of the Convention.

The motion having been seconded by the Delegate from Costa Rica, and accepted by all the delegates, it was submitted to the Convention and unanimously approved.

The Chairman of the Convention expresses his appreciation therefor, and stated that he would be pleased to transmit the resolution to the President of the Republic.

We take advantage of the opportunity to renew the assurances of our most distinguished consideration.

(Signed) E. LICEAGA,
Chairman of the Convention.
(Signed) JUAN J. ULLOA,
Secretary of the Convention.

TO SEÑOR GENERAL DON PORFIRIO DIAZ,
President of the United Mexican States,
Present.

THIRD INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS.

In the City of Mexico, the seventh day of December, 1907, the Delegates to the Third International Sanitary Convention of American Republics assembled in the National Palace, expressed the feelings of esteem and admiration that they have for Doctor Eduardo Liceaga, Chairman of the Convention, by reason of the valuable services that he had rendered to Public Health in his country, and *resolved,* by acclamation, to pay a tribute of respect and admiration to the distinguished hygienist of Mexico, glory of the medical profession in the American Continent.

Signed by all the Delegates to the Convention.

THIRD INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS.

The Delegates from Brazil, Colombia, and Uruguay, to the Third International Sanitary Convention of American Republics, duly authorized by their Governments, in the official capacity with which they are invested, state that: Deeming it useful and convenient to adopt for their respective countries the Convention signed at Washington the 14th of December, 1905, and in accordance with the Transitory Article thereof, they accept and sign *ad referendum,* in the name of their respective Governments, the said Convention signed at Washington the 14th of December, 1905.

Signed in quadruplicate, two copies in Spanish and two in English, in the Hall of Sessions of the Department of the Treasury, National Palace of Mexico, on the 7th of December, 1907.

OSWALDO GONCALVEZ CRUZ,
Delegate from Brazil.
GENARO PAYAN,
RICARDO GUTIERREZ,
Delegates from Colombia.
E. FERNANDEZ ESPIRO,
Delegate from Uruguay.

SUBJECTS THAT WILL FORM PART OF THE PROGRAM FOR THE FOURTH INTERNATIONAL SANITARY CONVENTION THAT WILL BE HELD IN SAN JOSE, COSTA RICA, IN DECEMBER, 1909.

In order to give publicity, for the information in advance of the different countries of America, to some of the important subjects that will be discussed in the next sanitary Convention, I take the liberty to publish herewith the resolution adopted by the International Sanitary Bureau of Washington in its session of October 4, 1908.

Among other subjects, the program for the Fourth International Sanitary Convention of American Republics shall include the following:

1st. Each delegate will present a report regarding the manner in which the resolutions adopted in the three previous Conventions have been put into practice in their respective countries.

2nd. Reports in regard to sanitary conditions in ports and measures proposed for the improvement of such sanitary conditions (with special reference to the principal ports).

3rd. Reports relating to the registration of the movement of population and the mortality of each country.

4th. Sanitation of cities and specially of ports.

5th. Measures for the protection of passengers that embark in vessels leaving infected ports.

(Signed) JUAN J. ULLOA,
Permanent Secretary.

RESOLUTIONS ADOPTED BY THE FIRST, SECOND, AND THIRD INTERNATIONAL SANITARY CONVENTIONS.

The following resolutions, adopted by the First, Second, and Third International Conventions of the American Republics, are hereby published, in accordance with the direction of the last named Convention, held in the City of Mexico, from December 2 to December 7, 1907:

RESOLUTIONS ADOPTED BY THE FIRST INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS, HELD IN THE CITY OF WASHINGTON, DECEMBER 2, 3, AND 4, 1902.

REPORT OF COMMITTEE ON ORGANIZATION.

Your committee respectfully report that to carry out the intent of this sanitary convention there should be—

1. A president, who shall also be the chairman of the executive board known as the International Sanitary Bureau.

2. One vice-president from each Republic represented. The duties of the vice-presidents shall be, in the order named, to preside in the absence of the president.

3. A secretary. The duties of the secretary shall be to keep a record of the proceedings of the convention from day to day, with a view to their publication to be followed by the publication of specially prepared papers relating to the designated subjects.

4. An advisory council, to consist of six delegates. The president shall be ex officio a member of said advisory council. The duties of the advisory council shall be to prepare the programme from day to day, to examine and pass upon the papers which it is proposed to be presented before the convention, to consider resolutions that are presented in general meetings and report upon them to the general body with recommendation either for their passage or rejection, and to attend to such other matters as may be referred to it.

The committee nominates the following officers to fill the positions named:

For president: Surg. Gen. Walter Wyman, United States Public Health and Marine-Hospital Service.

For vice-presidents: Señor Don Eduardo Moore, M. D., Chile; Señor Don Juan J. Ulloa, M. D., Costa Rica; Señor Don Juan Guiteras, M. D., Cuba; Señor Don Luis Felipe Carbo, Ecuador; Señor Don Antonio Lazo-Arriaga, Guatemala; Señor Don Nicanor Bolet Peraza, Honduras; Señor Don Eduardo Licéaga, M. D., Mexico; Señor Don D. Roman, M. D., Nicaragua; Mr. John Stewart, Paraguay; Dr. H. L. E. Johnson, United States; Señor Don Luis Alberto de Herrera, Uruguay.

For secretary: Dr. Arthur R. Reynolds, United States.

For members of the advisory council: Dr. Rhett Goode, United States; Dr. M. J. Rosenau, United States; Señor Don Juan Guiteras, M. D., Cuba; Señor Don Eduardo Licéaga, M. D., Mexico; Maj. Walter D. McCaw, U. S. Army; Señor Don Juan J. Ulloa, M. D., Costa Rica.

Your committee further recommend that the International Sanitary Bureau shall consist of five members, one of whom shall be the president of this Conference, the other four members to be nominated to the conference by the advisory council, and the said council shall also recommend to the convention the time and place for the next annual conference.

Respectfully submitted.

Dr. CARLOS FINLAY, *of Cuba,*
Dr. EDUARDO MOORE, *of Chile,*
Dr. H. L. E. JOHNSON, *of the United States,*
Dr. GLENDOWER OWEN, *of the United States,*
Minister FELIPE CARBO, *of Ecuador,*
Committee.

I.

Resolved, That the convention shall be governed by the resolutions agreed upon by the International Conference of American States held in Mexico in 1901 and 1902.

II.

Resolved, That the time of detention and disinfection at maritime quarantine stations shall be the least practicable time consistent with public safety and in accord with scientific precepts.

III.

(*a*) *Resolved,* That measures of prophylaxis against yellow fever shall be based upon the fact that up to the present time the bite of certain mosquitoes is the only proven natural means of propagation of yellow fever.

(*b*) *Resolved,* That the Governments represented in this conference approve the measures employed in Habana for the prevention of the spread of the disease on land, for the isolation of cases and the fumigation of buildings, it being understood that said measures are based upon the principle enunciated in resolution (*a*).

(*c*) *Resolved,* That the prevention of the importation of the disease by vessels wherein persons actually infected are found must conform to the methods employed on land, yet there are questions concerning the importation of infected mosquitoes that require further study before any decided modification of the quarantine laws can be recommended.

(*d*) *Resolved,* That the subject of bringing the quarantine laws to conform with the new doctrine of mosquito infection shall be referred to the International Sanitary Bureau of the American Republics for report at the next meeting.

(*e*) *Resolved,* That an International Sanitary Committee at Washington shall be appointed, and constituted as follows: Surg. Gen. Walter Wyman, chairman; Dr. Eduardo Licéaga, of Mexico; Dr. Eduardo Moore, of Chile; Dr. Juan Guiteras, of Cuba; Dr. Juan J. Ulloa, of Costa Rica; Dr. Rhett Goode, of the United States; Dr. A. H. Doty, of the United States.

IV.

Resolved, That the different Governments study, in their respective territories, the geographical distribution of the mosquito of the genus stegomyia, in order that said study may have practical application in subsequent conventions.

V.

Whereas bubonic plague and other diseases are spread by rats, mice, and other lower animals, which, to a great extent, find sustenance in animal and vegetable kitchen wastes commonly called garbage: Therefore, be it

Resolved, That all organic waste or garbage shall be kept separately on the premises until it can be removed, unmixed with anything else, and destroyed.

VI.

Whereas typhoid fever and Asiatic cholera are caused by swallowing food or drink contaminated by the discharges of previous cases: Therefore, be it

Resolved, That it be recognized by this conference that if all the discharges of every existing case of typhoid fever and Asiatic cholera were instantly disinfected, typhoid fever and Asiatic cholera would cease to be a menace to the world.

VII.

Whereas the Second American International Conference of the Pan-American States, held in the City of Mexico, October, 1901, to January, 1902, provided that a sanitary convention convene in Washington within one year from the signing of the resolutions on sanitation and quarantine, and shall elect an Inter-

national Sanitary Bureau, with permanent headquarters at Washington, for the purpose of rendering effective service to the different Republics represented in this convention: It is hereby

Resolved:

(*a*) That it shall be the duty of the International Sanitary Bureau to urge each Republic to promptly and regularly transmit to said bureau all data of every character relative to the sanitary conditions of their respective ports and territories.

(*b*) And to furnish said bureau every opportunity and aid for a thorough, careful, and scientific study and investigation of any outbreaks of pestilential diseases which may occur within the territory of any of the said Republics.

(*c*) *It is further resolved,* That it shall be the duty of the International Sanitary Bureau to lend its best aid and experience toward the widest possible protection of the public health of each of the said Republics in order that disease may be eliminated and that commerce between said Republics may be facilitated.

(*d*) *It is further resolved by this convention,* That it shall be the duty of the International Sanitary Bureau to encourage and aid or enforce in all proper ways the sanitation of seaports, including the sanitary improvements of harbors, sewage, drainage of the soil, paving, elimination of infection from buildings, and the destruction of mosquitoes and other vermin.

(*e*) *It is also recommended by this convention,* That in order to carry out the above measures a fund of $5,000 shall be collected by the Bureau of American Republics in accordance with paragraph 7 of the resolutions of the Second International American Conference above referred to.

VIII.

Resolved, That a vote of thanks be extended by this Convention, for their cordial hospitality and valued assistance, to His Excellency Theodore Roosevelt, President of the United States; to His Excellency John Hay, Secretary of State; to His Excellency Leslie M. Shaw, Secretary of the Treasury; to His Excellency W. H. Moody, Secretary of the Navy; to His Excellency David J. Hill, Assistant Secretary of State; to His Excellency Señor Don Manuel de Aspiroz, of Mexico; to His Excellency Señor Don Gonzalo de Quesada, of Cuba; to the ladies who honored and favored this Convention with their presence at the reception; to the officers and members of the Metropolitan and Cosmos Clubs; and last, but not least, to our distinguished president, Dr. Walter Wyman, Surgeon-General of the Public Health and Marine-Hospital Service.

RESOLUTIONS ADOPTED BY THE SECOND INTERNATIONAL SANITARY CONVENTION OF AMERICAN REPUBLICS, HELD IN THE CITY OF WASHINGTON, OCTOBER 9-14, 1905.

(Besides these resolutions, a Convention *ad referendum* was signed, in regard to preventive measures against cholera, bubonic plague and yellow fever.)

RECOMMENDATIONS BY THE ADVISORY COUNCIL.

The council recommends that the vice-presidents of the last Convention be continued in office, excepting when the representation to this Convention is different, in which case the new delegates are to take the place of the previous ones.

In the case of the Republics which were represented at the last Convention and which are not represented at the present Convention no vice-presidents shall be appointed; and the council recommends that the respective delegates from the countries which are represented at this Convention for the first time shall be appointed as vice-presidents also.

2. That the International Sanitary Bureau as constituted at the last meeting be continued.

3. That the resolutions presented by Dr. Guiteras concerning the printing of the 5,000 copies of the United States Pharmacopœia be recommended for approval.

I.

(*a*) *Resolved,* That the name of Surgeon-General Wyman be presented to the convention as president for this meeting, and that the name of Dr. Eduardo Licéaga be presented to the convention as president of the next convention, and that Dr. Juan J. Ulloa be nominated as permanent secretary.

(*b*) *Resolved,* That the convention be held every two years.

(*c*) *Resolved,* That the next meeting be held in the City of Mexico in December, 1907, subject to the call of the International Sanitary Bureau.

(*d*) *Resolved,* That immediately upon the completion of the organization the president recognize Dr. Eduardo Licéaga for a statement of general interest.

(*e*) *Resolved,* That the committee suggest that reports of the Republics of great length should be abstracted for presentation to the convention. The full papers will be published in the transactions.

II.

Whereas the decennial edition of the United States Pharmacopœia has just been published and issued by the board of trustees of the convention of the United States Pharmacopœia appointed by the American Pharmaceutical Association, and

Whereas this revised pharmacopœia embraces many new forms of value, both for use in therapeusis and prevention of epidemic disease and represents the best thought and labor of experts on these matters: Therefore be it

(*a*) *Resolved,* That a translation of this United States Pharmacopœia into the Spanish language would prove of great benefit to the medical profession and pharmacists in each of the republics represented in this convention; and further,

(*b*) *Resolved,* That the said pharmacopœia be referred to the several governments to report upon at the next meeting in Mexico, with a view to the adoption of an international pharmacopœia for the American republics; and be it further

(*c*) *Resolved,* That the International Sanitary Bureau be requested to ascertain if it is possible for the payment for such translation and publication of an edition of 5,000 copies to be made out of the fund provided for in section 7 of the resolutions adopted by the Second International Conference of American States, held in the City of Mexico in the winter of 1901-2; and be it further

(*d*) *Resolved,* That if it is found that the expense of this translation and publication can not be provided for from the fund provided by said section 7, the matter to be referred to the Bureau of the American Republics, with the request that if possible the said translation and publication be provided for by the said Bureau.

III.

Whereas the Republic of Mexico and the Panama Canal Zone, by the application of the mosquito doctrine to public sanitation, are nearing rapidly the desideratum of the final extinction of yellow fever; and

Whereas the Republic of Cuba, by the application of the same methods, has continued to maintain its territory free from yellow fever; and

Whereas as through lack of preparation to apply these methods the spread of yellow fever has been permitted in certain countries; and

Whereas in the city of New Orleans an epidemic unfortunately took a firm foothold has been held in check, and has been gradually reduced by the application of the said methods in the midst of the largest nonimmune population that was ever exposed to yellow fever: Therefore be it

(*a*) *Resolved,* That this convention sees in these results a further confirmation of the view that yellow fever is naturally transmitted only by the bite of infected mosquitoes.

(*b*) That the convention is of opinion that an efficient plan of defense against the propagation of yellow fever at the beginning of an epidemic can be easily established upon the basis of this doctrine.

(*c*) That the successful carrying out of such plan depends upon a thorough understanding of the mosquito doctrine by the people, and upon the support that they may give to the prompt and frank reporting and the proper handling of the first cases, and of all suspicious cases.

(*d*) That the convention expresses its censure of the sanitary authorities that do not report in due time the presence of yellow fever in their territory.

(*e*) That the congratulations of the convention be extended to the Republics of Mexico and Cuba and to the Canal Zone of Panama for the success attained, and also to the Public Health and Marine-Hospital service for the brilliant work done in New Orleans; and be it further

(*f*) *Resolved,* That in the opinion of this convention all maritime quarantine and the management of all epidemics that threaten to extend to neighboring States and countries should be placed in the hands of the national health authorities.

IV.

(*a*) *Resolved,* That a vote of thanks be extended by the International Sanitary Convention of the American Republics to His Excellency Theodore Roosevelt, the President of the United States of America, for his valued co-operation to the success of this conference and for the high meaning of the expressions of the cordial address with which he greeted the delegates to this convention at the reception he accorded to them at the White House on the 12th instant.

(*b*) *Resolved,* That a vote of thanks be extended to the honorable the Secretary of State, and to the honorable the Acting Secretary of the Treasury, for their addresses of welcome at the inauguration of this convention.

(*c*) *Resolved,* That a vote of thanks be extended to the Hon. Gonzalo de Quesada, minister plenipotentiary from Cuba.

(*d*) *Resolved,* That a vote of thanks be extended to Director Fox, as representing the Bureau of the American Republics, for his attentions to the delegates and for the arrangements made for their entertainment.

(*e*) *Resolved,* That an expression of our sincere appreciation be given to our highly esteemed president, Surgeon-General Wyman, for his kind treatment and for the efficient manner in which he has complied with his official duties.

(*f*) *Resolved,* That a vote of thanks be extended to the Cosmos Club and to the press of the city of Washington for the courteous manner in which they have treated us during our stay at this capital.

(*g*) *Resolved,* That a vote of thanks be extended in the name of the delegates from the Spanish American Republics to the delegates from the United States for their hospitality and excellent fellowship.

CONVENTION AD REFERENDUM CONCLUDED AT THE SECOND GENERAL INTERNATIONAL SANITARY CONVENTION OF THE AMERICAN REPUBLICS, IN WASHINGTON, ON OCTOBER 14, 1905.

The Presidents of the Republics of Chile, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Mexico, Nicaragua, Peru, United States of America, and Venezuela, having found that it is useful and convenient to codify all the measures destined to guard the public health against the invasion and propagation of yellow fever, plague, and cholera, have designated as their delegates, to wit:

Republic of Chile, Señor Dr. D. Eduardo Moore, professor of the medical faculty, hospital physician;

Republic of Costa Rica, Señor Dr. D. Juan J. Ulloa, ex-vice-president, ex-minister of the interior of Costa Rica, ex-president of the medical faculty of Costa Rica;

Republic of Cuba, Señor Dr. D. Juan Guiteras, member of the superior board of health of Cuba, director of the "Las Animas" Hospital, professor of general pathology and tropical medicine of the University of Habana, and Señor Dr. D. Enrique B. Barnet, executive chief of the health department of Habana, member and secretary of the superior board of health of Cuba;

Republic of Ecuador, Señor Dr. D. Serafin S. Wither, chargé d'Affaires and consul-general of Ecuador in New York, and Señor Dr. D. Miguel H. Alcívar, member of the superior board of health of Guayaquil, professor of the medical faculty and surgeon of the General Hospital of Guayaquil;

Republic of the United States of America, Dr. Walter Wyman, Surgeon-General of the Public Health and Marine-Hospital Service of the United States; Dr. H. D. Geddings, Assistant Surgeon-General of the Public Health and Marine-Hospital Service of the United States and representative of the United

States at the sanitary convention of Paris; Dr. J. F. Kennedy, secretary of the board of health of the State of Iowa; Dr. John S. Fulton, secretary of the board of health of the State of Maryland; Dr. Walter D. McCaw, major-surgeon in the United States Army; Dr. J. D. Gatewood, surgeon in the United States Navy; Dr. H. L. E. Johnson, member of the American Medical Association (member of the board of trustees);

Republic of Guatemala, Señor Dr. D. Joaquín Yela, consul-general of Guatemala in New York;

Republic of Mexico, Señor Dr. D. Eduardo Licéaga, president of the superior council of health of Mexico, director and professor of the National School of Medicine, member of the Academy of Medicine;

Republic of Nicaragua, Señor Dr. D. J. L. Medina, member of the Second Pan-American Medical Congress of the city of Habana in 1901;

Republic of Peru, Señor Dr. D. Daniel Eduardo Lavorería, professor of the medical faculty, member of the National Academy of Medicine, physician of the "Dos de Mayo" Hospital, chief of the division of hygiene of the ministry of fomento;

Dominican Republic, Señor D. Emilio C. Joubert, minister resident in Washington;

Republic of Venezuela, Señor D. Nicolás Veloz-Goiticoa, chargé d'affaires of Venezuela,

Who, having made an interchange of their powers and found them good, have agreed to adopt, *ad referendum,* the following propositions:

CHAPTER I.

REGULATIONS TO BE OBSERVED BY THE POWERS SIGNATORY TO THE CONVENTION AS SOON AS PLAGUE, CHOLERA, OR YELLOW FEVER MAY APPEAR IN THEIR TERRITORY.

SECTION I.—*Notification and subsequent communications to other countries.*

ARTICLE I. Each Government should immediately notify other Governments of the first appearance in its territory of authentic cases of plague, cholera, or yellow fever.

ART. II. This notification is to be accompanied, or very promptly followed, by the following additional information:

1. The neighborhood where the disease has appeared.
2. The date of its appearance, its origin, and its form.
3. The number of established cases and the number of deaths.
4. For plague—the existence among rats or mice of plague, or of an unusual mortality; for yellow fever—the existence of *Stegomyia fasciata* in the locality.
5. The measures taken immediately after the first appearance.

ART. III. The notification and the information prescribed in Articles I and II are to be addressed to diplomatic and consular agents in the capital of the infected country; but this is to be construed as not preventing direct communication between officials charged with the public health of the several countries.

For countries which are not thus represented, they are to be transmitted directly by telegraph to the Governments of such countries.

ART. IV. The notification and the information prescribed in Articles I and II are to be followed by further communications dispatched in a regular manner in order to keep the Governments informed of the progress of the epidemic.

These communications, which are to be made at least once a week, and which are to be as complete as possible, should indicate in detail the precautions taken to prevent the extension of the disease.

They should set forth, first, the prophylactic measures taken relative to sanitary or medical inspection, to isolation, and disinfection; second, the measures taken relative to departing vessels to prevent the exportation of the disease, and, especially under the circumstances mentioned in paragraph 4 of Article II of this section, the measures taken against rats and mosquitoes.

ART. V. The prompt and faithful execution of the preceding provisions is of the very first importance.

The notifications only have a real value if each Government is warned in time of cases of plague, cholera, or yellow fever and of suspicious cases of those diseases supervening in its territory. It can not, then, be too strongly recommended to the various Governments to make obligatory the declaration of cases

of plague, cholera, or yellow fever, and of giving information of all unusual mortality of rats and mice, especially in ports.

ART. VI.—It is understood that neighboring countries reserve to themselves the right to make special arrangements with a view of organizing a service of direct information between the chiefs of administration upon the frontiers.

SECTION II.—*Conditions showing a given territorial area to be infected or to have been freed from infection.*

ART. VII. Information of a first case of plague, cholera, or yellow fever does not justify against a territorial area where it may appear the application of the measures prescribed in Chapter II, as hereinafter indicated.

Upon the occurrence of several nonimported cases of plague or a nonimported case of yellow fever or when cases of cholera form a focus the area is to be declared infected.

ART. VIII.—To limit the measures to the affected regions alone, Governments should only apply them to persons and articles proceeding from the contaminated or infected areas.

By the word "area" is understood a well determined portion of territory described in the information which accompanies or follows notification; thus, a province, a state, "a government," a district, a department, a canton, an island, a commune, a city, a quarter of a city, a village, a port, a "polder," a hamlet, etc., whatever may be the extent and population of these portions of territory.

But this restriction, limited to the infected area, should only be accepted upon the formal condition that the Government of the infected country shall take the necessary measures, 1, to prevent, unless previously disinfected, the exportation of articles named in 1 and 2 of Article XII coming from the contaminated area; and 2, measures to prevent the extension of the epidemic; and provided further, that there be no doubt that the sanitary authorities of the infected country have faithfully complied with Article I of this convention.

When an area is infected, no restrictive measure is to be taken against departures from this area if these departures have occurred five days, at least, before the beginning of the epidemic.

ART. IX. That an area should no longer be considered as infected, official proof must be furnished:

First, that there has been neither a death nor a new case of plague or cholera for five days after isolation,[1] death, or cure of the last plague or cholera case. In the case of yellow fever the period shall be eighteen days, but each Government may reserve the right to extend this period.

Second, that all the measures of disinfection have been applied; in the case of plague, that the precautions against rats have been observed, and in the case of yellow fever that the measures against mosquitoes have been executed.

CHAPTER II.

MEASURES OF DEFENSE BY OTHER COUNTRIES AGAINST TERRITORIES DECLARED TO BE INFECTED.

SECTION I.—*Publication of prescribed measures.*

ART. X. The Government of each country is obliged to immediately publish the measures which it believes necessary to take against departures either from a country or from an infected territorial area.

The said Government is to communicate at once this publication to the diplomatic or consular agent of the infected country residing in its capital, as well as to the International Sanitary Bureau.

The Government shall be equally obliged to make known through the same channels the revocation of these measures or modifications which may be made in them.

In default of a diplomatic or consular agency in the capital, communications are made directly to the Government of the country interested.

[1]The word "isolation" signifies isolation of the patient, of the persons who care for him, and the forbidding of visits of all other persons, the physician excepted. By isolation in the case of yellow fever is understood the isolation of the patient in an apartment so screened as to prevent the access of mosquitoes.

SECTION II.—*Merchandise—Disinfection—Importation and transit—Baggage.*

ART. XI. There exists no merchandise which is of itself capable of transmitting plague, cholera, or yellow fever. It only becomes dangerous in case it is soiled by pestous or choleraic products, or, in the case of yellow fever, when such merchandise may harbor mosquitoes.

ART. XII. No merchandise or objects shall be subjected to disinfection on account of yellow fever, but in cases covered by the previous article the vehicle of transportation may be subjected to fumigation to destroy mosquitoes. In the case of cholera and plague disinfection should only be applied to merchandise and objects which the local sanitary authority considers as infected.

Nevertheless, merchandise or objects enumerated hereafter may be subjected to disinfection or prohibited entry, independently of all proof that they may or may not be infected:

1. Body linen, wearing apparel in use, clothing which has been worn, bedding already used.

When these objects are transported as baggage, or in the course of a change of residence (household furniture), they should not be prohibited, and are to be subjected to the regulations prescribed by Article XIX.

Baggage left by soldiers and sailors and returned to their country after death are considered as objects comprised in the first paragraph of No. 1 of this article.

2. Rags, and rags for making paper, with the exception, as to cholera, of rags which are transported as merchandise in large quantities compressed in bales held together by hoops.

New clippings coming directly from spinning mills, weaving mills, manufactories or bleacheries, shoddy. and clippings of new paper, should not be forbidden.

ART. XIII. In the case of cholera and plague there is no reason to forbid the transit through an infected district of merchandise and the objects specified in Nos. 1 and 2 of the preceding article if they are so packed that they can not have been exposed to infection in transit.

In like manner, when merchandise or objects are so transported that in transit they can not come in contact with soiled objects, their transit across an infected territorial area should not be an obstacle to their entry into the country of destination.

ART. XIV. The entry of merchandise and objects specified in Nos. 1 and 2 of Article XII should not be prohibited if it can be shown to the authorities of the country of destination that they were shipped at least five days before the beginning of the epidemic.

ART. XV. The method and place of disinfection, as well as the measures to be employed for the destruction of rats and mosquitoes, are to be fixed by authority of the country of destination, upon arrival at said destination. These operations should be performed in such a manner as to cause the least possible injury to the merchandise.

It devolves upon each country to determine questions relative to the payment of damages resulting from disinfection or from the destruction of rats or mosquitoes.

If taxes are levied by a sanitary authority, either directly or through the agency of any company or agent, to insure measures for the destruction of rats and mosquitoes on board ships, the amount of these taxes ought to be fixed by a tariff published in advance, and the result of these measures should not be a source of profit for either State or sanitary authorities.

ART. XVI. Letters and correspondence, printed matter, books, newspapers, business papers, etc. (postal parcels not included), are not to be submitted to any restriction or disinfection. In case of yellow fever postal parcels are not to be subjected to any restrictions or disinfection.

ART. XVII. Merchandise arriving by land or by sea should not be detained permanently at frontiers or in ports.

Measures which it is permissible to prescribe with respect to them are specified in Article XII.

Nevertheless, when merchandise, arriving by sea in bulk (vrac) or in defective packages, is contaminated by pest-stricken rats during the passage and is incapable of being disinfected, the destruction of the germs may be assured by putting said merchandise in a warehouse for a period to be decided by the sanitary authorities of the port of arrival.

It is to be understood that the application of this last measure should not

entail delay upon any vessel nor extraordinary expenses resulting from the want of warehouses in ports.

ART. XVIII. When merchandise has been disinfected by the application of the measures prescribed in Article XII, or put temporarily in warehouses in accordance with the third paragraph of Article XVII, the owner or his representative has the right to demand from the sanitary authority which has ordered such disinfection or storage a certificate setting forth the measures taken.

ART. XIX. Baggage. In the case of soiled linen, bed clothing, clothing, and objects forming a part of baggage or furniture coming from a territorial area declared contaminated, disinfection is only to be practiced in cases where the sanitary authority considers them as contaminated. There shall be no disinfection of baggage on account of yellow fever.

SECTION III.—*Measures in ports and at maritime frontiers.*

ART. XX. Classification of ships. A ship is considered as infected which has plague, cholera, or yellow fever on board, or which has presented one or more cases of plague or cholera within seven days or a case of yellow fever, at any time during the voyage.

A ship is considered as suspected on board of which there have been a case or cases of plague or cholera at the time of departure or during the voyage, but no new case within seven days; also such ships as have lain in such proximity to the infected shore as to render them liable to the access of mosquitoes.

The ship is considered indemne which, although coming from an infected port, has had neither death nor case of plague, cholera, or yellow fever on board, either before departure, during the voyage, or at the time of arrival, and which in the case of yellow fever has not lain in such proximity to the shore as to render it liable, in the opinion of the sanitary authorities, to the access of mosquitoes.

ART. XXI. Ships infected with plague are to be subjected to the following regulations:

1. Medical visit (inspection).
2. The sick are to be immediately disembarked and isolated.
3. Other persons should also be disembarked, if possible, and subjected to an observation,[1] which should not exceed five days dating from the day of arrival.
4. Soiled linen, personal effects in use, the belongings of crew[2] and passengers which, in the opinion of the sanitary authorities are considered as infected, should be disinfected.
5. The parts of the ship which have been inhabited by those stricken with plague, and such others as, in the opinion of the sanitary authorities are considered as infected, should be disinfected.
6. The destruction of rats on shipboard should be effected before or after the discharge of cargo as rapidly as possible, and in all cases with a maximum delay of forty-eight hours, care being taken to avoid damage of merchandise, the vessel and its machinery.

For ships in ballast this operation should be performed immediately before taking on cargo.

ART. XXII. Ships suspected of plague are to be subjected to the measures which are indicated in Nos. 1, 4 and 5 of Article XXI.

Further, the crew and passengers may be subjected to observation, which should not exceed five days, dating from the arrival of the ship. During the same time the disembarkment of the crew may be forbidden, except for reasons of duty.

The destruction of rats on shipboard is recommended. This destruction is to be effected before or after the discharge of cargo, as quickly as possible, and in all cases with a maximum delay of forty-eight hours, taking care to avoid damage to merchandise, ships and their machinery.

For ships in ballast this operation should be done, if done at all, as early as possible, and in all cases before taking on cargo.

ART. XXIII. Ships indemne from plague are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

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[1]The word "observation" signifies isolation of the passengers, either on board ship or at a sanitary station, before being given free pratique.

[2]The term "crew" is applied to persons who may make or who have made a part of the personnel of the vessel and of the administration thereof, including stewards, waiters, "cafedji," etc. The word is to be construed in this sense wherever employed in the present Convention.

The only regulation which the sanitary authorities at a port of arrival may prescribe for them consists of the following measures:

1. Medical visit (inspection).

2. Disinfection of soiled linen, articles of wearing apparel, and the other personal effects of the crew and passengers, but only in exceptional cases, when the sanitary authorities have special reason to believe them infected.

3. Without demanding it as a general rule, the sanitary authorities may subject ships coming from an infected port to a process for the destruction of the rats on board before or after the discharge of cargo. This operation should be done as soon as possible, and in all cases should not last more than twenty-four hours, care being taken to avoid damaging merchandise, ships and their machinery, and without interfering with the passing of passengers and crew between the ship and the shore. For ships in ballast this procedure, if practiced, should be put in operation as soon as possible, and in all cases before taking on cargo.

When a ship coming from an infected port has been subjected to a process for the destruction of rats, this process should only be repeated if the ship has touched meanwhile at an infected port and has been alongside a quay in such port, or if the presence of sick or dead rats on board is proven.

The crew and passengers may be subjected to a surveillance, which should not exceed five days, to be computed from the date when the ship sailed from the infected port. The landing of the crew may also, during the same time, be forbidden except for reasons of duty.

Competent authority at the port of arrival may always demand, under oath, a certificate of the ship's physician, or in default of a physician, of the captain, setting forth that there has not been a case of plague on board since departure and that no marked mortality among the rats has been observed.

ART. XXIV. When upon an indemne ship rats have been recognized as pest stricken as a result of bacteriological examination, or when a marked mortality has been established among these rodents, the following measures should be applied:

1. Ships with plague-stricken rats:

(*a*) Medical visit (inspection).

(*b*) Rats should be destroyed before or after the discharge of cargo as rapidly as possible, and in all cases with a delay not to exceed forty-eight hours; the deterioration of merchandise, vessels and machinery to be avoided. Upon ships in ballast this operation should be performed as soon as possible, and in all cases before taking on cargo.

(*c*) Such parts of the ship and such articles as the local sanitary authority regards as infected shall be disinfected.

(*d*) Passengers and crew may be submitted to observation, the duration of which should not exceed five days, dating from the day of arrival, except in special cases, where the sanitary authority may prolong the observation to a maximum of ten days.

2. Ships where a marked mortality among rats is observed:

(*a*) Medical visit (inspection).

(*b*) An examination of rats, with a view to determining the existence of plague, should be made as quickly as possible.

(*c*) If the destruction of rats is judged necessary, it shall be accomplished under the conditions indicated above in the case of ships with plague-stricken rats.

(*d*) Until all suspicion may be eliminated, the passengers and crew may be submitted to observation, the duration of which should not exceed five days, counting from the date of arrival, except in special cases, when the sanitary authority may prolong the observation to a maximum of ten days.

ART. XXV. The sanitary authorities of the port must deliver to the captain, the owner, or his agent, whenever a demand for it is made, a certificate setting forth that the measures for the destruction of rats, have been efficacious and indicating the reasons why these measures have been applied.

ART. XXVI. Ships infected with cholera are to be subjected to the following regulations:

1. Medical visit (inspection).

2. The sick are to be immediately disembarked and isolated.

3. Other persons ought also to be disembarked, if possible, and subjected, dating from the arrival of the ship, to an observation the duration of which shall not exceed five days.

4. Soiled linen, wearing apparel, and personal effects of crew and passengers which, in the opinion of the sanitary authority of the port, are considered as infected, are to be disinfected.

5. The parts of the ship which have been inhabited by persons sick with cholera, or which are considered by the sanitary authority as infected, are to be disinfected.

6. The bilge water is to be discharged after disinfection.

The sanitary authority may order the substitution of good potable water for that which is contained in the tanks on board.

The discharge or throwing overboard into the water of a port, of dejecta, shall be forbidden unless they have been previously disinfected.

ART. XXVII. Ships suspected of cholera are to be subjected to measures prescribed under Nos. 1, 4, 5, and 6 of Article XXVI.

The crew and passengers may be subjected to an observation, which should not exceed five days, to date from the arrival of the ship. It is recommended during the same time to prevent the debarkation of the crew except for reasons of duty.

ART. XXVII. Ships indemne of cholera are to be admitted to free pratique immediately, whatever may be the nature of their bill of health.

The only regulations which the sanitary authorities of a port may prescribe in their case are the measures provided in Nos. 1, 4, and 6 of Article XXVI.

The crews and passengers may be submitted, in order to show their state of health, to an observation, which should not exceed five days, to be computed from the date when the ship sailed from the infected port.

It is recommended that during the same time the debarkation of the crew be forbidden except for reasons of duty.

Competent authority at the port of arrival may always demand, under oath, a certificate from the ship's surgeon, or, in the absence of a surgeon, from the captain, setting forth that there has not been a case of cholera upon the ship since sailing.

ART. XXIX. Competent authority will take account, in order to apply the measures indicated in Articles XXI to XXVIII, of the presence of a physician on board and a disinfecting apparatus in ships of the three categories mentioned above.

In regard to plague, it will equally take account of the installation on board of apparatus for the destruction of rats.

Sanitary authorities of such countries, where it may be convenient to make such regulations, may dispense with the medical visit and other measures toward indemne ships which have on board a physician specially commissioned by their country.

ART. XXX. Special measures may be prescribed in regard to crowded ships, notably emigrant ships, or any other ship presenting bad hygienic conditions.

ART. XXXI. Any ship not desiring to be subjected to the obligations imposed by the authority of the port in virtue of the stipulations of the present convention is free to proceed to sea.

It may be authorized to disembark its cargo after the necessary precautions shall have been taken, namely, first, isolation of the ship, its crew and passengers; second, in regard to plague, demand for information relative to the existence of an unusual mortality among rats; third, in regard to cholera, the discharge of the bilge water after disinfection and the substitution of a good potable water for that which is provided on board the ship.

Authority may also be granted to disembark such passengers as may demand it, upon condition that these submit themselves to all measures prescribed by the local authorities.

ART. XXXII. Ships coming from a contaminated port, which have been disinfected and which may have been subjected to sanitary measures applied in an efficient manner, shall not undergo a second time the same measures upon their arrival at a new port, provided that no new case shall have appeared since the disinfection was practiced and that the ships have not touched in the meantime at an infected port.

When a ship only disembarks passengers and their baggage, or the mails, without having been in communication with terra firma, it is not to be considered as having touched at a port, provided that in the case of yellow fever it has not approached sufficiently near the shore to permit the access of mosquitoes.

ART. XXXIII. Passengers arriving on an infected ship have the right to demand of the sanitary authority of the port a certificate showing the date of their arrival and the measures to which they and their baggage have been subjected.

ART. XXXIV. Packet boats shall be subjected to special regulations, to be established by mutual agreement between the countries in interest.

ART. XXXV. Without prejudice to the right which governments possess to agree upon the organization of common sanitary stations, each country should provide at least one port upon each of its seaboards, with an organization and equipment sufficient to receive a vessel, whatever may be its sanitary condition.

When an indemnes vessel, coming from an infected port, arrives at a large mercantile port, it is recommended that she be not sent to another port for the execution of the prescribed sanitary measures.

In every country ports liable to the arrival of vessels from ports infected with plague, cholera, or yellow fever should be equipped in such a manner that indemne vessels may there undergo, immediately upon their arrival, the prescribed measures, and not be sent for this purpose to another port.

Governments should make declaration of the ports which are open in their territories to arrivals from ports infected with plague, cholera, or yellow fever.

ART. XXXVI. It is recommended that in large seaports there be established:

(*a*) A regular medical service and a permanent medical supervision of the sanitary conditions of crews and the inhabitants of the port.

(*b*) Places set apart for the isolation of the sick and the observation of suspected persons. In the *Stegomyia* belt there must be a building or part of a building screened against mosquitoes, and a launch and ambulance similarly screened.

(*c*) The necessary installation for efficient disinfection and bacteriological laboratories.

(*d*) A supply of potable water above suspicion, for the use of the port, and the installation of a system of sewerage and drainage adequate for the removal of refuse.

SECTION IV.—*Measures upon land frontiers—Travelers—Railroads—Frontier zones—River routes.*

ART. XXXVII. Land quarantines should no longer be established, but the governments reserve the right to establish camps of observation, if they should be thought necessary, for the temporary detention of suspects.

This principle does not exclude the right for each country to close a part of its frontier in case of necessity.

ART. XXXVIII. It is important that travelers should be submitted to a surveillance on the part of the personnel of railroads, to determine their condition of health.

ART. XXXIX. Medical intervention is limited to a visit (inspection), with the taking of temperature of travelers and the succor to be given to those actually sick. If this visit is made, it should be combined as much as possible with the custom house inspection, to the end that travelers may be detained as short a time as possible. Only persons evidently sick should be subjected to a searching medical examination.

ART. XL. As soon as travelers coming from an infected locality shall have arrived at their destination, it would be of the greatest utility to submit them to a surveillance, which should not exceed ten or five days, counting from the date of departure, the time depending upon whether it is a question of plague or cholera. In case of yellow fever the period should be six days.

ART. XLI. Governments may reserve to themselves the right to take particular measures in regard to certain classes of persons, notably vagabonds, emigrants, and persons traveling or passing the frontier in bands.

ART. XLII. Coaches intended for the transportation of passengers and mails should not be retained at frontiers.

In order to avoid this retention, a system of relays ought to be established at frontiers, with transfer of passengers, baggage, and mails. If one of these carriages be infected or shall have been occupied by a person suffering from plague, cholera, or yellow fever, it shall be detached from the train for disinfection at the earliest possible moment.

ART. XLIII. Measures concerning the passing of frontiers by the personnel of railroads and of the post-office are a matter for agreement of the sanitary authorities concerned. These measures should be so arranged as not to hinder the service.

ART. XLIV. The regulation of frontier traffic, as well as the adoption of exceptional measures of surveillance, should be left to special arrangement between contiguous countries.

ART. XLV. The power rests with governments of countries bordering upon rivers to regulate by special arrangement the sanitary régime of river routes.

ARTICLES RELATING TO YELLOW FEVER.

ART. XLVI. Ships infected with yellow fever are to be subjected to the following regulations:

1. Medical visit (inspection).

2. The sick are to be immediately disembarked, protected by netting against the access of mosquitoes, and transferred to the place of isolation in an ambulance or a litter similarly screened.

3. Other persons should also be disembarked, if possible, and subjected to an observation of six days, dating from the day of arrival.

4. In the place set apart for observation there shall be screened apartments or cages where anyone presenting an elevation of temperature above 37.6 degrees C. shall be screened until he may be carried in the manner indicated above to the place of isolation.

5. The ship shall be moored at least 200 meters from the inhabited shore.

6. The ship shall be fumigated for the destruction of mosquitoes before the discharge of cargo, if possible. If a fumigation be not possible before the discharge of the cargo, the health authorities shall order, either

(*a*) The employment of immune persons for discharging the cargo; or

(*b*) If nonimmunes be employed they shall be kept under observation during the discharging of cargo and for six days, to date from the last day of exposure on board.

ART. XLVII. Ships suspected of yellow fever are to be subjected to the measures which are indicated in Nos. 1, 3, and 5 of the preceding article; and if not fumigated, the cargo shall be discharged as directed under subparagraph (*a*) or (*b*) of the same article.

ART. XLVIII. Ships indemne from yellow fever, coming from an infected port, after the medical visit (inspection) shall be admitted to free pratique, provided the duration of the trip has exceeded six days.

If the trip be shorter, the ship shall be considered as suspected until the completion of a period of six days, dating from the day of departure.

If a case of yellow fever develop during the period of observation, the ship shall be considered as infected.

ART. XLIX. All persons who can prove their immunity to yellow fever, to the satisfaction of the health authorities, shall be permitted to land at once.

ART. L. It is agreed that, in the event of a difference of interpretation of the English and Spanish texts, the interpretation of the English text shall prevail.

TRANSITORY DISPOSITION.

The governments which may not have signed the present convention are to be admitted to adherence thereo upon demand, notice of this adherence to be given through diplomatic channels to the Government of the United States of America and by the latter to the other signatory governments.

Made and signed in the city of Washington on the 14th day of the month of October, 1905, in two copies, in English and Spanish respectively, which shall

be deposited in the State Department of the Government of the United States of America, in order that certified copies thereof, in both English and Spanish, may be made to transmit them through diplomatic channels to each one of the signatory countries.

Dr. EDUARDO MOORE.
JUAN J. ULLOA.
JUAN GUITERAS.
E. B. BARNET.
EMILIO C. JOUBERT.
M. H. ALCIVAR.
WALTER D. MCCAW.
H. D. GEDDINGS.
JOHN S. FULTON.
WALTER D. MCCAW,
J. D. GATEWOOD.
H. L. E. JOHNSON, M. D.
JOAQUÍN YELA.
E. LICÉAGA.
J. L. MEDINA, M. D.
DANIEL EDO. LAVORERÍA.
N. VELOZ-GOITICOA.

RESOLUTIONS ADOPTED BY THE THIRD INTERNATIONAL SANITARY CONFERENCE, HELD IN THE CITY OF MEXICO FROM DECEMBER 2 TO 7, 1907.

1. To request the representatives of the Governments of Brazil, Colombia, and Uruguay that, in accordance with the full powers with which they are invested by their respective governments, they approve and adhere to the Sanitary Convention of Washington of 1905.

2. To recommend to the Governments of the American Republics represented in this Convention the codification of all the sanitary laws and measures of the respective countries, and as soon as they have done so to request said governments to send one or two copies of said codification to the International Sanitary Bureau of Washington.

3. To authorize the International Sanitary Bureau of Washington to establish, by such means as it may deem advisable, relations with the International Sanitary Bureau of Paris, to carry out the resolutions of the Third International Convention of American States, held in Rio de Janeiro, in August, 1906.

4. To authorize the Secretary to include in the printed transactions of the Third International Convention, a summary of all the resolutions adopted successively by the First and Second International Sanitary Conventions held in Washington.

5. To recommend to the American Governments the advisability of agreeing upon compulsory vaccination against smallpox.

6. To recommend to the governments represented at this convention the advisability of declaring free of fiscal duties, quinine salts, fine mesh wire guabe used for protection against mosquitoes, crude petroleum, ready-made mosquito netting, and such fabrics as are used in the manufacture thereof.

7. To recommend that, through their respective sanitary authorities, the governments carry on the most active propaganda possible, concerning ethiology, prophylaxis, and treatment of malaria, and that they reach a decision concerning the establishment of a series of public lectures on said matters in the schools, shops, barracks, etc.

8. To recommend that, in such places as may be necessary, centers shall be established to make free distribution of quinine to the poor in such quantities as may be necessary for the prophylaxis of malaria.

9. To recommend to the Governments to direct the maritime sanitary authorities to state in such bills of health as they issue, the mortality caused by malaria.

10. To instruct the International Sanitary Bureau of Washington to distribute regularly information concerning the existence of malaria in their several important seaport cities.

11. To recommend likewise to the Governments here represented the publica-

tion of a pamphlet wherein shall be compiled, in a brief, simple and practical form, and in such manner that the people at large will readily understand it, all useful information concerning malaria, and to freely distribute said pamphlet.

12. To recommend to the governments here represented the non-admittance to their respective territories of immigrants afflicted with trachoma or beri-beri.

13. To recommend to the American nations the nationalization and centralization of the sanitary authorities by means of proper legislation.

14. To recommend to the American Governments the following provisions for the purpose of preventing the spread of tuberculosis on railroad cars and steamers.

(A). To avoid, as far as possible, the use of fixed carpets and curtains.

(B). To recommend the use of cuspidors, which should be profusely distributed.

(C). The periodical disinfection of the cars or berths, including furniture, beds, wash basins, clothes, etc., etc.; this disinfection should be made more especially in the berths of steerage passengers. All clothes, including napkins, should be disinfected before being washed.

(D). The disinfection of dining room utensils, and, in addition, to direct that napkins for the use of passengers be always kept in paper bags or envelopes, and to recommend that the food be kept under wire gauze covers, and that the doors and windows of railroad cars, as well as the berths and state rooms of steamers, be protected by fine wire gauze screens, in order to prevent the entrance of flies.

(E.) The examination of the personnel of the service, both on the railway passenger cars and on steamers, in order not to employ persons afflicted with tuberculosis.

(F). All steamers should have a special and comfortable department for the transportation of persons afflicted with tuberculosis, and the construction of said department should be such that it will not retain any dust.

(G). To post notices in conspicuous places prohibiting the habit of spitting on the floor.

(H). To recommend the advisability of employing on board physicians who are not only graduate practitioners, but who also, if possible, shall have had special training concerning the prophylaxis of tuberculosis.

15. To recommend the advisability of European nations adopting the Sanitary Convention of Washington of 1905, with respect to such colonies as they have in America, and especially in matters relating to yellow fever.

16. To recommend to the American nations that the bills of health they issue shall contain the same kind of information.

17. To recommend to the American governments the advisability of establishing separate hospitals for the treatment of consumptives, and whenever this shall not be possible, to establish separate pavillions in the hospitals for the treatment of said patients.

18. Whereas the international prophylaxis of tuberculosis, in so far as it relates to navigation and to railway communication, should be the result of a perfect local organization of the countries in the systematic struggle against such disease, the Third International Sanitary Convention agrees to recommend to the governments of the nations here represented, the generalization of the sanitary measures employed against the invasion of said disease.

19. In view of the great advantages to be derived from taking sanitary measures as near as possible to a contaminated locality, not only in order to avoid the introduction of cholera, the bubonic plague and yellow fever in another locality, but also to guard the lives of persons on board the vessel which sailed from the contaminated port, the undersigned delegate proposes:

That the next convention discuss and agree as to the provisions to which the vessels, cargoes, and passengers shall be subjected at the contaminated port of departure, in order to afford the greatest possible protection to passengers and avoid the occurrence of cases on board.

20. Whereas, The Third International Conference of American States, held at Rio de Janeiro in August, 1906, by resolution declared that the delegates to this International Sanitary Convention in Mexico should resolve upon practical means for the adoption of measures intended to obtain the sanitation of the cities, and especially of the ports,

Resolved, That this subject be one for consideration also by the members of the next International Sanitary Convention of American Republics to be held in

Costa Rica, and that the International Sanitary Bureau in Washington be authorized to make investigations and to take such other action as may be necessary to present this matter in satisfactory form at the said convention in Costa Rica.

21. *Resolved,* That an office be provided in the Bureau of the American Republics for the use of the International Sanitary Bureau.

That authority is given for engaging the services of an employee who shall be paid by the International Bureau.

That the expenses incurred shall be authorized and certified to by the same Bureau.

That the Bureau of the American Republics be entrusted with the collection of the fund provided for in section 7 of the resolutions relating to international sanitary police, adopted by the Second International Conference of American States, held in the City of Mexico in 1901-2.

That the Bureau of the American Republics be likewise entrusted with this fund and the keeping of the accounts.

22. That at the next meeting of the International Sanitary Congress, the model documents or forms to be employed by the nations adhering to this Convention, shall be discussed and approved in order to verify the same.

23. That in every port open to foreign commerce the sanitary authorities shall issue bills of health to all vessels applying for same, and in accordance with such model or form as the next Convention may adopt.

24. That a Committee be appointed to give, in the name of the Third International Sanitary Convention, a vote of thanks to His Excellency General Porfirio Diaz, President of the Mexican Republic, for his important co-operation in the success of this Convention.

25. That a vote of thanks be extended to the Vice-President, and to the Secretaries of State, of the Treasury, and of the Interior for the kind attention shown us.

26. That a vote of thanks be accorded to the Superior Council of the Government of the Federal District, and to the Municipal Government of this city for the kind attentions they have shown us.

27. That we sincerely thank the committee of ladies who have so kindly waited on the wives and friends of the foreign delegates.

28. That a vote of thanks be given to the Superior Board of Public Health and to the Director of the Water Supply Works of this City for the valuable services they have rendered us, and

29. That we express to the Mexican delegates to this Convention our deep appreciation of the exquisite courtesy and the splendid manner in which they have welcomed us to their country.

Attest:
JUAN J. ULLOA,
Permanent Secretary.

Dr. Walter Wyman, of the United States,
President of the First and Second International Sanitary Conventions of American Republics.

REPORT OF DR. OSWALDO GONÇALVEZ CRUZ, DELEGATE OF BRAZIL.

The sanitary conditions of Brazil are improving every year as the result of the campaign waged against infectious diseases, and the material improvements made in the city of Rio de Janeiro, which has been the principal focus of infection for Brazil.

The local Boards of Health in the principal States of Brazil have succeeded in maintaining the excellent sanitary conditions of the country and of its ports.

A few sporadic cases of bubonic plague at Rio de Janeiro, and of yellow fever at Rio, Nitheroy, Pará and Manáos, were the diseases which required special attention, but the Government is confident of securing their complete extinction in the near future.

As regards Rio de Janeiro—the former great focus of yellow fever—we may consider the disease practically extinct. The few sporadic cases observed had their origin in small foci in Nitheroy which faces Rio and is in constant communication with it, being only 20 minutes distant. The Federal Government, in conjunction with the local government, has taken steps to stamp out the disease, and the campaign which is being systematically carried on in that city is giving excellent results, so that the complete extinction of yellow fever at Rio is but a question of a few more months.

The problem of carrying out prophylactic measures against yellow fever at Rio was a most difficult one, as it had to deal with a city which is very broken and hilly, and which is situated on the sides of mountains, thickly covered with vegetation, which covers an area of over 133 square kilometers, is more than 60 kilometers long, and from 4 to 5 kilometers wide, and which has a population of over 811,000 inhabitants.

As regards malaria, the prophylactic measures employed have been based on the idea of its sole transmission by mosquitoes, and in the regions where such measures have been put into effect this disease has greatly diminished.

Trachoma was observed among immigrants in some localities of the State of São Paulo. The sanitary administration of São Paulo, which is one of the best of Brazil, has installed a special prophylactic service, which has prevented the spread of the disease. Immigrants are examined at the ports of entry to prevent its introduction into the country.

The cases of beri-beri observed come mainly from the upper Amazon, this disease having almost entirely disappeared from some of the northern ports of Brazil, such as São Luiz do Maranhão, where it formerly made great ravages.

In short, the present sanitary condition of Rio de Janeiro is very satisfactory. With the mortality rate at 21.7 per 1,000 inhabitants, it is one of the healthiest of the tropical cities, and healthier than many European cities, such as Madrid, Lisbon, Athens, Saint Petersburg, Naples and many others.

The following are the measures which have been adopted in Brazil and are being vigorously carried out, to prevent and stamp out the aforesaid diseases:

YELLOW FEVER. A campaign based on the theory of its sole transmission by the *Stegomyia calopus,* without regard to its transmission from person to person by contagion or through the medium of articles which have been contaminated by those suffering from the disease. The sanitary administration consists of a special division independent of the other sanitary services of the Union, which is under the jurisdiction of the Director General of the Public Health, and consists of one medical inspector, ten assistant inspectors, who are physicians, 75 medical students, and about 1,000 sanitary guards. The personnel is divided into three divisions, which have charge of the following services: (a) The isolation of those suffering from the disease and the fumigation of the houses occupied by them; (b) the systematic destruction of mosquitoes; (c) the fiscalization of the therapeutic agents used, the verification of deaths and medical vigilance over persons not immune residing in the infected center. The systematic and continual destruction of the *Stegomyia* is the principal prophylactic measure to be employed against yellow fever. Therefore each nation can, of itself, by destroying the *Stegomyia,* defend itself absolutely against

epidemics of yellow fever, so that the question of yellow fever loses its importance as an international question and remains one of purely national interest. In accordance with these principles, sanitary legislation, from an international point of view, may be most liberal, but should be most rigorous from a national point of view, for countries whose local conditions permit the propagation of the *Stegomyia;* while on the other hand restrictive measures are perfectly useless in countries where the climatic conditions are such that the transmitting mosquito can not exist. In countries where the *Stegomyia* exist, rigorous measures should be taken for their extermination and to prevent the importation of new generations of mosquitoes.

Bubonic Plague. Bactericidal and parasitical disinfection by means of phenol and cresol for the destruction of the bacillus and of the transmitting flea (*Pulex Cheops*) is the principal means employed. This is effected at the first appearance of the disease among rats, which is discovered by the vigilance service instituted in the houses or communicated to the health authorities by interested parties. The disinfection is effected by means of solutions at a high temperature, and the floors of the houses are taken up to disinfect underneath. Another measure consists in the extermination of rats in the infected centers, as they seem to increase the virulence of the bacillus. A war is made on rats by coating the ground about the houses adjoining the foci with cement, and by the systematic destruction of these animals by a special sanitary corps in charge of this service. Inoculation with anti-plague serum for the prevention of this disease is made whenever permitted. The systematic isolation in a hospital of all persons suffering with the disease and the disinfection of all articles which come in contact with the patients, complete the measures employed. The treatment prescribed consists of inoculation with the serum prepared in the Institute of Manguinhos, which reduced the mortality from this disease 50 per cent.

Malaria. The destruction of mosquitoes in the cities and the administration of quinine (30 centigrams every three days), wherever large groups of persons are temporarily residing in malarial districts, engaged on public works, such as railways, drainage works, etc., are the measures which have been adopted with splendid results in Brazil.

Trachoma. The State of São Paulo has organized a series of sanitary stations which have charge of the service of diagnosing and treating the cases of this disease which have been found among immigrants in certain sections of this State, and of prescribing the necessary prophylactic measures to prevent the spread of the disease. At the present time immigrants are inspected at the ports, and those affected with the disease are forbidden entry.

Beri Beri. The prophylaxis of this disease is empirical, owing to the lack of any scientific basis as to its cause. Vessels carrying cases of beri beri are thoroughly fumigated by means of Clayton gas. In addition to this measure, barracks and prisons are required to make alterations in their buildings so as to have proper conditions of light and air. At the same time care has been taken to improve the quality of the food of the localities attacked by the disease.

SANITARY CONDITIONS OF THE PORTS, WORKS ALREADY CONSTRUCTED, THOSE IN PROCESS OF CONSTRUCTION, OR WHOSE CONSTRUCTION IS PROPOSED.

With regard to the maritime sanitation service, the ports of Rio de Janeiro and Santos have a complete installation, which consists of a floating disinfecting station equipped with a Clayton apparatus, stoves, compartments for disinfection by means of sulphur and formaldehyde, and an isolation and vigilance hospital on land. In great emergencies the service of these two ports is aided by the old lazaretto of Ilha Grande, which has been transformed into a disinfection and observation station. Disinfecting pontoons are in course of construction at the parts of Bahia, Pará, Maranhão and Rio Grande do Sul, and should be ready for operation within a few months. The lazaretto of Tamandaré at Pernambuco has been transformed into a disinfection and observation station, fully equipped, and has charge of the treatment of vessels which call at ports between Bahia and Rio Grande do Norte. Vessels bound for the north of Brazil receive sanitary treatment at the Tatuóca station in Pará. At this station, as well as at that of Tamandaré and Ilha Grande, there is a disinfection plant situated on land, an isolation hospital and pavilions for observation, when necessary (3d class passengers).

The great engineering works which have been constructed in the ports of

Brazil deserve special mention as they are of sanitary as well as of commercial importance. The port of Santos is equipped with docks which enable vessels to moor alongside; the low marshy shores which formerly existed have been filled up and the city has been made completely sanitary by the construction of an excellent sewerage system and water works. The wharf of Santos will have, when completed, a total length of 4,726.88 meters. Active work is being done on the port works at Rio de Janeiro, 500 meters of wharf having already been opened to traffic.

The port works at Manáos are almost completed; 433 meters of wharf have already been built, there remaining only 158 meters for its completion.

Contracts have been made for the port works at Belém, Bahia and Rio Grande do Sul and the work of construction will shortly be begun, while improvement works are projected at the port of Victoria.

The Federal Government is planning a project to be submitted to the National Congress, for the complete sanitary organization of all the ports of Brazil. In accordance with this project, the Union will have charge of the maritime and land prophylaxis against all infectious diseases and all the ports of Brazil will be equipped with hospitals and disinfecting stations, the plans for which have already been made. This service will probably be organized within the coming year and will provide Brazil with a perfect and complete sanitary equipment. Twenty-four ports along the Brazilian coast will thus be equipped with a complete sanitary service.

WATER SUPPLY.

The new water works at Rio de Janeiro have been begun and the work of construction is being actively carried forward. When completed, the city will have a water supply of 360,000,000 liters per day, or an average of over 440 liters per inhabitant.

SEWERS.

The principal cities of Brazil are provided with sewerage systems. The Government is planning to substitute the chemical treatment of fecal waters now in use at Rio de Janeiro, by a biological treatment. For this purpose it has appointed a commission to make a study of this method, and it is now making careful experiments in a bed for observation installed for this purpose.

SANITATION OF HOUSES.

This service is rigorously carried out in accordance with the sanitary law of January 5, 1904, and sanitary regulations of March 8th, of the same year.

It is already referred above to the aid which the Federal Government gives to the States in sanitary matters.

Brazil continues to be governed by the sanitary law of January 5, 1904, which was continued in force by a resolution of Congress of this year.

REPORT OF DRS. ERNESTO SOZA AND PEDRO LAUTARO FERRER, DELEGATES OF CHILE.

INFECTIOUS DISEASES IN CHILE.

The provisional programme of this Convention prescribes, in paragraph (a), that each delegate shall present a report on the existence of transmissible diseases which may prevail in the territory of the country represented by him, especially with reference to bubonic plague, yellow fever, cholera, malaria, beriberi, and trachoma, giving detailed information on the measures which have been adopted for the prevention or stamping out of any of the diseases above mentioned.

We can say that, of the diseases referred to, only the bubonic plague has invaded our territory. We will supplement this report by adding a few lines on other infectious diseases of a similar nature, and which threaten us, such, for instance, as the small-pox.

BUBONIC PLAGUE.

Chile has marked the ultimate geographic stop in the advance of this scourge, which has spread throughout all latitudes and climates of the earth.

After having been considered by many hygienists as one of the diseases whose extinction would be the result of the preventive measures of modern hygiene, it has reappeared with alarming characteristics in the civilized world. Its new and periodical sorties, from its four endemic foci in Asia, were initiated in 1893 by invading Europe and the American continent.

In 1902 and 1903, San Francisco and San Diego, in California, Texas and Todos Santos and Mazatlan, in Mexico, received the first visits of the disease, it having invaded Peru immediately thereafter. The first case in the latter country was discovered in the Port of Pisco by Doctor Enrique Mestanza, whose diagnosis thereon was sent to Professor Doctor Ernesto Odriozola, of Lima, at a time when the epidemic was invading the port of Callao. Its next stop was Iquique, in Chile, attacking simultaneously Mollendo, Pacasmayo, Salavery, Tujillo, and several other localities of the Peruvian Republic.

In the Orient, Asuncion, the capital of Paraguay, was visited by the plague in 1899, invading thereafter Rosario de Santa Fe, and Buenos Aires, in the Argentine Republic, and appearing simultaneously in Santos and Rio de Janeiro, in Brazil, and in other northern ports of the southern hemisphere.

Iquique.—This port, situated on the 20° 12′ south latitude, and 70° 11′ west longitude, was infected in May, 1903.

On the 25th of the same month, the first bacteriological diagnosis of the plague in Iquique was made, which confirmed the reports made to the authorities by physicians, based upon clinic diagnosis carried out some days previous.

The epidemic lasted until the 24th of September, 1903, causing the following number of cases: total, 214 (125 men, and 89 women); deaths, 135.

Of this mortality, 38 died within the first twenty-four hours after the cases were taken into the lazaretto, and 58 died in their respective houses without receiving the serotherapic treatment. The accompanying map shows the principal foci of the epidemic (Annex I).

The danger caused by this epidemic to the commercial life of the nitrate region, compelled the authorities to take energetic measures for protection against the scourge. A committee of physicians, presided over by the Director of the Institute of Hygiene, and composed of bacteriologists and hygienists (among whom were physicians that had been sent by the Chilean Government to study the plague in Rosario de Santa Fe in 1899), was sent to the north, with the necessary powers to organize, conjointly with the *Intendente* of the province and the representative of the Executive, the necessary sanitary services. Under this committee several branches were operated, such as the Sanitary Inspection, the bacteriological laboratory, the public disinfecting station, the isolation house, the lazaretto, the sanitary commissariats, the sanitary police, etc., etc., as well as all services related to the transit of passengers, transportation of cargo and baggage, and the general movement of the port.

The Maritime Sanitary Regulations of 1895 were rigidly enforced. The issuance of sanitary passports was prescribed, and the disinfection of certain packages considered as suspicious, such as bed clothing, clothes, rags, sacks, leather articles, etc., was required. The port physicians were placed in charge of this work, in accordance with the provisions of the Ordinance of Navigation and Maritime Health.

One of the efficient measures that facilitated to a great extent sanitary investigations and disinfections, and, consequently, the abatement of the disease, was the strict enforcement of the law compelling physicians to report all cases of infectious diseases; this law, promulgated on the 7th of February, 1899, provides, under penalty of a fine, that the following diseases shall be reported within twenty-four hours after the diagnosis, certain or probable, has been made: Cholera morbus; yellow fever; bubonic plague; diphtheria; smallpox; typhoid fever; scarlet fever, and leprosy.

The Superior Council of Public Health, which has the power of prescribing the general measures of prophylaxis, insisted, before the Central Government, upon the necessity of the establishment of a Sanitary station in the northern part of the Republic, for otherwise it would have been necessary to suspend the commercial relations with the countries threatened with an invasion of the disease. The establishment of another sanitary station in the extreme southern

section of the country, in Agua Fresca, near Punta Arenas in the Strait of Magellan, was also requested to protect the country against the epidemics of the Atlantic.

The Superior Council of Public Health requested that the law of Sanitary Police be put in force; this law gives the civil and sanitary authorities full powers to enforce measures of defense against epidemics, and authorizes the President of the Republic to close infected or suspicious ports; to prescribe quarantines; to establish sanitary cordons; to declare as infected, towns where any cases of contagious diseases may have occurred; to issue sanitary ordinances; to prescribe penalties for violations thereof; and to adopt such sanitary measures as he may deem best for the protection of public health.

After four months of struggle, we succeeded in stamping out the first epidemic at Iquique.

In February, 1904, the plague reappeared in a port further south, Antofagasta, situated on the 23° 38′ south latitude, and 70° 22′ west longitude.

Within the period of five months, there were recorded in Antofagasta 185 known cases, the number of concealed cases being estimated at about 35 per cent.

The lazaretto had the following movement: Total number of cases treated, 83; deaths, 23. Besides, 20 cadavers of plague-stricken persons were found. These cases were concealed by the families.

Valparaiso.—The first cases that occurred in this port were caused by infection imported from Callao, in 1903, by the S. S. "Colombia," and in 1904, by the S. S. "Limari." A few cases were recorded in May of the current year.

It has been fully proven that the infection was caused by the captains and a physician of the two mentioned steamers, who had concealed cases of plague that had occurred on board the vessels, thus violating the Maritime Health Regulations, and the elementary principles of morality, for the sake of commercial interests.

Valparaiso, the commercial emporium of the Republic, was compelled to take stringent prophylactic measures in order to stamp out the scourge. The Superior Council of Public Health and the Departmental Council of Valparaiso suggested to the authorities the necessary emergency measures that were taken.

Arica and Tacna.—In 1904, these two ports were also visited by the plague, a few cases being recorded. In October and November, 28 cases, with 9 deaths, occurred in Arica, and in Tacna, from December, 1904, to March, 1905, 9 cases with 6 deaths.

Pisagua.—The Chilean town that has suffered most on account of the plague is that of Pisagua, north of Iquique, and it is the northernmost nitrate port of Chile. It has a population of from 3,000 to 4,000 inhabitants, varying in accordance with the increase or decrease of commercial exports. In order to estimate the seriousness of these exotic invasions, it must be taken into consideration that from Pisagua, situated at 19° 34′ south latitude and 70° 11′ west longitude, to Taltal, situated at 25° 25′ south latitude and 70° 34′ west longitude—which is the zone ordinarily threatened by the scourge—there is a population of 150,000 inhabitants, exporting annually 30,000,000 quintals of nitrate (1 quintal= 100 pounds); this region produces, besides, a great amount of minerals and salts of various kinds. In this zone are included, from south to north, the ports of Taltal, Antofagasta, Mejillones, Tocopilla, Iquique, Pisagua, Coloso, Caleta Buena, and Junin.

The first invasion of bubonic plague in the Port of Pisagua took place in the year 1905, and caused 310 cases in two months. The rapidity with which the epidemic spread out, and the violence of the attack caused a great panic among the inhabitants, who abandoned their homes in large masses. This migration left the city with only the local, military, and sanitary authorities. The inhabitants took refuge in the plains, where the infection has never penetrated. The following table shows the movement of this epidemic:

Statistical Resumé of the Epidemic of Bubonic Plague in Pisagua, from January 27, 1905, to March 31, 1905:

Total number of cases..... 308
Deaths . . . . 72, or 23.37%.

The total number of cases is distributed between the two sexes as follows:

Men.....199 with 44 deaths (22.11%)
Women.....109 with 28 deaths (25.68%)

The distribution by ages is as follows:

From 21 to 30 years	36.36%
From 31 to 40 years	15.90%
From 51 to 60 years	13.63%
Under 10 years	11.36%
From 11 to 20 years	9.09%
From 41 to 50 years	...
Over 61 years	2.27%

The number of cases treated in the lazaretto was	281
Treated in private houses	27
Total	308

In this resumé are not included two plague-stricken bodies that were found in private houses.

Distribution by nationalities:

Chileans	196 or	63.63%
Peruvians	72 or	23.37%
Bolivians	26 or	8.44%
Asiatics	7 or	2.27%
Italians	2 or	.64%
Spaniards	1 or	.32%
Portuguese	1 or	.32%
Austrians	1 or	.32%
Unknown	2 or	.64%

Valparaiso and Viña del Mar.—The plague made its reappearance in 1906, causing 23 victims in the latter city, and a few isolated cases in the former.

The Superior Council of Hygiene sent a sanitary inspector, who, with the consent of the local authorities and the Departmental Council of Valparaiso, was able to enforce prophylactic measures and to quench the disease in its incipiency.

At the same time, in the northern section of the country, new isolated cases had appeared, in this instance with greater tenacity than in the Port of Taltal, taking the proportions of an epidemic in the early part of the current year, to such an extent that the presence of the Director of the Institute of Hygiene was required. This officer brought with him the necessary elements to organize the defense and to establish a Bureau of Hygiene.

Santiago.—In January of the present year, the Asiatic plague made its appearance in our capital.

The Superior Council of Public Health and the Institute of Hygiene were ready for the defense from the beginning; their sanitary inspectors were duly authorized to proceed with the work. The Supreme Government created a Central Sanitary Board composed of the *Intendente* of the province, the First *Alcalde* (Mayor) of the city and the President of the Superior Council of Health, and assisted by the sanitary inspectors for the enforcement of its resolutions. Although the Law of Sanitary Police was not put in force, which law authorizes the adoption of extraordinary measures in these cases, this Board took, however, energetic and stringent measures of prevention, which, if they had been termed as "dictatorial" by the press adverse to such actions, were, nevertheless, crowned with success, inasmuch as the infection was checked and the number of cases reduced. Only 24 were recorded during the period from January to April, 1907. These cases did not constitute a focus, and it is interesting to note that they were scattered throughout the city, as may be seen in the accompanying map (Annex II).

First Half of 1907.—During this period the plague reappeared in the northern part of the Republic. The statistics, which are given in detail in another section of this report, show a total of 695 cases with 302 deaths, or 43 per cent of mortality.

The commonest clinic form of the plague is the bubonic form proper in 75 per cent of the cases. The order of the inflammation of the ganglions has been manifested as follows: Ganglions of the right and of the left inguens; of the crural and inguinal regions; of both inguens; of the neck; of the axillas, and of combined regions. The septicemic or intestinal form was presented in 5 or 6 per cent of the cases; the pneumonic form in 1 or 2 per cent, and the rest of the cases were mild or ambulatory. In Annex III is given a table containing the statistics referred to above, and which was furnished us by Dr. R. Davila Boza, Director of the Institute of Hygiene at Santiago.

Yellow fever, cholera, malaria, beri-beri, and trachoma.—As we have already stated, yellow fever does not exist in Chile.

In 1868, the year in which the great invasion of this disease took place in Callao and Lima, it spread to Tacna, Arica, and Iquique in Chile, but in a milder form. Twelve patients from the north took refuge in Valparaiso, but they were cured and did nothing but cause alarm and panic.

In 1904, three yellow fever patients arrived in Punta Arenas by the S. S. "Oropesa" from Rio de Janeiro. This steamer left said port on the 23d of April; the first case occurred four days thereafter, and the next two, two days later. One of the patients died. The "Oropesa" did not accept the quarantine imposed on her and left for Coronel, where she again refused to be subjected to quarantine, and, sailing for Valparaiso, arrived at that port on the 9th day of May.

It seems, therefore, that our country, which has always remained immune from the infections caused by the *Stegomya Fasciata,* is not a field for yellow fever.

In 1906 the S. S. "Luxor," of the Kosmos Line, arrived from Callao infected with yellow fever. This steamer started from Guayaquil, had a crew of 61 members, carried 2 first-class and 6 second-class passengers; the number of cases that occurred during the trip was five, three of which died.

This steamer was fumigated in Callao; the bilge water was bacteriologically examined, and the provision was changed; all living plants on the steamer were thrown overboard, but in spite of all these measures, the disease still continued. In view thereof, she was ordered on the 11th of April to sail for the south without touching any port of the Peruvian coast. On April 15th she arrived in Arica where she was disinfected and subjected to quarantine until the 18th day of the same month, far from the coast; the members of the crew and the passengers were inspected daily.

No new cases occurred, and the steamer was, therefore, given free pratique.

Malaria is unknown in the country. Beri-beri is likewise unknown. In August of 1904, the ship "Talborg," from the Fiji Islands, was stranded on the coast of Itata, Southern Chile, having on board some patients who were considered by the local authorities as cases of bubonic plague. A sanitary inspector of the Superior Council found that they were cases of beri-beri. The entire crew perished on account of the small epidemic, except two of its members, the cook and a young boy.

Trachoma was imported in 1892 by Spanish immigrants. The diagnosis was made by Doctor Maximo Cienfuegos, Professor of Ophthalmology, who informed the Government of the dangers which this new disease could bring to the country.

Arabian and Turkish immigrants imported new cases of granulous conjunctivitis. In a statistical table of the ophthalmological clinic, it is shown that trachoma is credit with only 0.14 per cent in 17,000 known cases of various forms of conjunctivitis.

Other infectious diseases; small pox; vaccination.

Smallpox is the scourge that in other times made the greatest number of victims in Chilean territory.

Its history covers many gloomy pages. The disease made its first appearance in Chile in the year 1561, imported by the ships of Governor Don Francisco de Villagra. Natives and conquerors alike, by thousands, paid their tribute to this scourge. Inoculation, or the method of provoking a similar but milder disease by means of the introduction into the dermis of the smallpox pus, diminished the damages caused by the epidemic. This system was first used in Chile in the latter part of the XVIII century by Father Pedro Manuel Chaparro, a creole and eminent physician, who as has been verified in our historic archives, was ignorant of the fact that the use of this therapeutic process had been general

in Europe since 1717, due to the initiative of Lady Wortly, through a fortunate coincidence known in the history of medicine. Some years later, this same physician was the first one that utilized Jenner's discovery, making the first vaccination in 1805, with vaccine sent to Chile by the Viceroy of Plata.

In the brief synopsis of the history of smallpox in Chile, mention should be made of the work done by the Spanish physician Don Francisco Javier Balmis, who was sent by King Charles IV, in the beginning of the last century, to spread throughout the new world the benefits of vaccination, and whose expedition, started in 1803, rendered so noble services over almost the entire American continent, particularly in this beautiful land of New Spain, the flora and fauna of which he described in 1794.

In Chile, Manuel Julián Grajales, one of the assistant physicians of the Balmis expedition, was the apostle of the vaccination propaganda.

This was the commencement of the fight against smallpox, a fight that has not yet been ended because we have not been able to overcome the opposition, of a political nature, rather than social, presented against the passage of the bill establishing compulsory vaccination in the Republic.

However, it seems that this time the force of public opinion will overpower that opposition, and this bill, which is now before the House of Deputies, will become a law of the Republic within a few more months.

In order to counteract this omission, the Central Board of Vaccination, by authority of regulations issued by the Executive, propagates its benefits throughout the country, assisted by the Departmental boards, vaccination physicians, medical inspectors, and a numerous corps of graduated vaccinators.

The voluntary submission to vaccination, the propaganda by means of the press, circulars, the clergy, and by persuasion, principally in fields and homes, and partially compulsory vaccination in schools, in the army and navy, in prisons, etc., fill to a certain extent the action expected from the bill in question.

To this propaganda, as well as to the fear of a serious recrudescence of the epidemic in Valparaiso, was due that the number of persons vaccinated in the country during 1905, reached a total of 590,386, an increase of 100,000 over 1904; this total is distributed as follows: New vaccinations, 262.145; revaccinations, 328,241.

Animal vaccine is the one preferred by the public; in 1905, 567,964 vaccinations were made with it, and only 22,422 were vaccinations from arm to arm.

Of the total vaccinations made in 1905, 28,023 were children under one year of age, an amount which represents only one-fourth of the nativity in the country, as the number of births in Chile correspond to 40 per thousand of its population.

The following is a resumé of the movement of the last invasion:

In 1902, the first smallpox cases that infected the littoral from Ascotán to Calama and Antofagasta, were imported from the Bolivian frontier, 24 deaths having been recorded in a period of four months.

In 1903, the disease spread through the plains of Tarapacá, towards the south, and caused 389 deaths, recorded in the civil register.

In 1904 and 1905, the epidemic reached its algid period: In Tarapacá it caused 253 cases with 96 deaths; in Talca, 253 cases with 151 deaths, and several cases and deaths in several towns with smaller foci, such as Tacna, Arica, Copiapo, Coquimbo, Ovalle, Rancagua, Curicó, and San Fernando. In 1904 Santiago had 1,551 known cases, of which 1,475 were treated in the lazaretto, with 792 deaths, or a mortality of 53.6 per cent. A salient feature is the fact that the deaths take place always among those that have not been vaccinated. For instance, in the last epidemic at Talca, of 253 cases, 234 were of non-vaccinated persons, and 19 of persons that had been vaccinated over ten years previous; the entire total of 151 deaths, was of persons that had not been vaccinated. This proportion is shown in all statistics of smallpox epidemics. This is the strongest argument that can be adduced in support of the cause of compulsory vaccination.

In 1905, Valparaiso was violently attacked by an epidemic of smallpox. First, 87 cases with 34 deaths occurred in 1904; the epidemic continued its march slowly until January, 1905, and, taking violent proportions in May and June of the same year, it caused 3,427 cases in July, and 3,434 in August; the number of cases in September was reduced to 1,079, and in October to 217.

In order to stamp out this epidemic, it was necessary to put in force the most energetic measures.

The civil and local authorities, the Board of Residents specially organized for this purpose, the Fire Department, and all the residents of the city, rendered valuable assistance to the medical profession and to the Board of Vaccination. The School of Medicine of Santiago closed its sessions, and the professors, together with the students, went to render their services without any compensation in the lazarettos, hospitals, and homes, and to help in the work of vaccination. The people were at first opposed to vaccination, but they finally submitted.

The Government was placed under the necessity of putting in force the Law of Sanitary Police in order to be empowered with extraordinary faculties.

The great number of vaccinations made exhausted the supply of vaccine virus, and it was necessary to order it by cable from the Argentine, Bolivia, Peru and Switzerland, which nations nobly hastened to help us.

The number of vaccinations during that year was 116,640, and in the entire Republic, 567,964. The number of cases of smallpox in that port reached the sum of 10,953, with 4,948 deaths.

In Santiago, there were in the lazaretto 1,628 cases, of which 807 died. The number of cases that occurred in Antofagasta was 1,079. The epidemic caused 9,563 deaths in the whole Republic.

Fifty per cent of the patients were from 20 to 60 years of age; 25 per cent from one to five years.

The confluent and hemorrhagic forms of smallpox are always observed in non-vaccinated patients, and are responsible for the total number of deaths. The mild form saved always the vaccinated persons. These are classic and incontestable facts shown in our statistics.

Scarlet fever, diphtheria, and typhoid fever.—According to the "Boletín de Higiene y Demografía," Santiago had the following cases of these diseases during the years specified:

1901—Scarlet fever—1 case; diphtheria or croup, 112.
1902—Scarlet fever—2 cases; diphtheria or croup, 137.
1903—Scarlet fever—0 cases; diphtheria or croup, 39.

The distribution of the anti-diphtheric serum, manufactured by the Institute of Hygiene, among the physicians of the capital, and the *Intendentes* and Governors, for free distribution upon medical prescription, was as follows during the years specified:

1899—1,129 vials of 0.20 cubic centimeters.
1900— ... vials of 0.20 cubic centimeters.
1901—2,575 vials of 0.20 cubic centimeters.
1902—2,192 vials of 0.20 cubic centimeters.
1903—1,795 vials of 0.20 cubic centimeters.
1904—1,615 vials of 0.20 cubic centimeters.
1905—1,427 vials of 0.20 cubic centimeters.

Typhoid fever is an endemic disease.

The table given in another part of this report, prepared by the statistical division of the Institute of Hygiene, shows the mortality caused by typhoid fever from 1899 to 1905, in relation with the general mortality (Annex IV).

Exanthematic typhus, which appeared in an epidemic form in 1862, had not reappeared in Chile. A few mild cases occurred in August of the current year in Valparaiso, but they were isolated.[1]

Prophylaxis of Tuberculosis in Chile.

The enormous development that tuberculosis has taken in our country has been a source of worry to the Chilean Society and Government. In 1901, the Demographic Bulletin of the Institute of Hygiene showed a mortality of 42.9 per cent in regard to tuberculosis among the deceased between the ages of ten and sixty. Some leagues against tuberculosis have been founded, which distribute prophylactic pamphlets, post notices in the streets advising the people not to expectorate in the thoroughfare, and establish maritime sanitariums and dispensaries.

Hygienists and men of science are exerting all efforts in order to establish

1We enclose with this report a sanitary map of Santiago, with annotations of all cases of infectious diseases occurring in 1906, and which were disinfected by the Public Disinfecting Station. The colors of the annotation correspond with those of the international agreement, in the following manner: Yellow for small-pox, red for tuberculosis, green for typhus, purple for diphtheria, and brown for several causes.

in the country three kinds of sanitariums for consumptives, according to the climate classification that experience has recently demonstrated, to wit: Highland, Lowland, and Maritime Sanitariums.

A fact that is worthy of note is that the Chilean Indians cannot bear the benefit of civilization.

The religious order of the Saletians established in Puinta Arenas, gathered during the last years of the past century four hundred Patagonian Indians, who belong to a robust and well developed race, for the purpose of civilizing them; but at the end of seven years only thirty of them were left, all the others were victims of consumption. A short while after they entered the Institution most of them were attacked with galloping consumption. Those that escaped from the disease owed their lives to the fact that they were allowed to return to the life to which they had been accustomed, to walk barefooted and to cast away all other hindrances that they had been compelled to wear in accordance with the requirements of civilization.

At the present time consumptives take refuge in certain points which have a quiet reputation for the treatment of their ailment, but which have really become foci of infection for tuberculosis.

The municipal authorities at those points have been alarmed by such conditions and in one of them, Quilque, they have anticipated their measures to those of the Central Government by compelling physicians to report all cases of consumption to the local authorities, in order to disinfect the houses where consumptives have died or from which they have been removed.

The Superior Council of Hygiene in its session of April 3, 1902, resolved, on motion of Doctor Carvallo, to request the Minister of the Interior to suggest to Congress the amendment of the law of February 7, 1899, to the end of including pulmonary tuberculosis among the diseases that physicians are compelled to report.

By virtue of Section 1 of the Municipal Ordinance of Santiago of July 12, 1899, disinfection is compulsory under penalty of forty pesos in all cases of smallpox, scarlet fever, diphtheria and typhoid fever, and, besides, in cases of tuberculosis when the patient is in public or private institutions, such as colleges, hotels, boarding houses, houses of prostitution, etc. (Annex F. 4).

In some branches of the Government the prophylaxis of tuberculosis is more or less well attended, as, for instance, in the Government Railroad where the service is in charge of the distinguished physician, Sr. Eduardo Garcia Collao. Annex 1 shows that the disinfection division of the Santiago station composed of a majordomo and twelve disinfectors, attend to the daily disinfection of the baggage of all passengers arriving at the capitol, which is done by the Morrison apparatus with a solution of formalin at 5 per cent in the interior of the freight cars after having been hermetically closed. When it is known that a passenger suffering from an infectious disease has travelled in the Government lines, especially if there be traces of his presence, such as sputum, blood, etc., the cars are disinfected in the manner above stated and besides thoroughly scrubbed and washed with a solution of corrosive sublimate. We will soon have in operation machinery for the disinfection by steam of sleeping cars, and also for live stock cars.

On the other hand, prophylaxis of tuberculosis is neglected in some institutions, the public schools, for instance. It occurs frequently that school teachers suffer from consumption. These unfortunate persons whose salaries are very limited, depriving themselves of many necessities of life, and the majority of whom have to work excessively in order to make both ends meet, are compulsory victims of tuberculosis. It is in these cases that the affection of the larynx is observed. These consumptive teachers, who in order to make themselves audible to their pupils, have to get close to them, constitute a real danger for the children who become infected by respiration. In order to overcome this great danger to the country the condition of those consumptive teachers should be ameliorated, either exempting them from service with full pay during the time of their sickness or discharging them definitely.

Annex K. 2 shows the statistics of mortality by tuberculosis compared with the other causes of death in the principal cities of the Republic, and which gave an average of 15.7 per cent for 1899 and 14.4 per cent for 1905.

It is true that the tuberculosis mortality shown in that table is lower, but it should be borne in mind that consumptives are not admitted in our hospitals, and in many cases the families of those dying from the disease give other causes of

death in order to deceive the authorities. Santiago has an asylum for consumptives, and the San Jose Hospital to which are removed such consumptives as are found in other hospitals and also those which apply for admission therein, the latter ones are few, however, for the reason that the people are prejudiced against it, and only recur to it in the more advanced stages of the disease.

Practical Measures to Prevent the Infection from Consumptives Travelling Together with Well Persons Either by Rail or Water.

Compared with other diseases, tuberculosis is not easily transmitted; while a transmitory connection is needed for the transmission of syphilis and gonorrhea, a persistent infection is necessary for that of tuberculosis. We all know the experiments that Grancher and Potian used to make with the nasal mucus of their alumni after their lectures in the hospital, finding in many cases the presence of Koch bacillus, which before the lectures were absent.

Generally, the presence of a person in the railroad cars is too short to enable him to contract the disease, for which reason we are of the opinion that it would be sufficient to follow the same practice in force in many countries of Europe and of the United States, and that has been established in our Republic with satisfactory results by the director of the service, which is the daily disinfection of the passengers' baggage, as well as of the berths that have been used; it would also be advisable to do away, as far as possible, with rugs and curtains. The cars should be provided with numerous cuspidors properly distributed.

If the above measures are prescribed for railroads they are more necessary for steamers. The latter should be provided with a Geneste-Herschell apparatus for the disinfection of berths by steam, and all cabins should be washed with antiseptic solutions. In the dining rooms the same methods followed in sanitariums for consumptives should be observed, to wit: Sterilization of forks, knives, plates, etc., after having been used; napkins used by consumptives should be adequately wrapped so as to prevent them from coming into contact with the others. There should be cuspidors in the rooms, passageways, etc., of the steamer.

Finally, a fine should be imposed, as is done in Sydney, Australia, upon those who expectorate in public places.

WATER SUPPLY.

The State supports especially the Water Services of the Republic.

The office of Water Inspection and Sanitation, studies and orders the execution of all the technical works required by the need of the people.

The Fiscal Administrations of the Water Enterprises or the Municipalities, supported by the State, are in charge of these public services. In the city of Santiago the sources of water supply are the water-falls of Ramón and Vitacura, located east of the city, the former having its origin in the chain of mountains and the latter from filtrations of the Mapocho River, located at a distance of 4 and 8 kilometers, respectively, of the city of Santiago. From these sources are drawn an average annual supply of 72,040 m^3 daily, with a maximum of 118,910 m^3, and a minimum of 37,280 m^3. Additional works and water conduits now in construction, shall increase within two years the water supply of Vitacura to 91,928 m^3 daily.

The Ramón Creek has a variable supply, for the average annual production has been of 111,722 m^3 daily; its monthly maximum being of 180,300 m^3, and a daily supply of 251,860 m^3, and a monthly minimum of 56,683 m^3, and a daily supply of 54,800 m^3.

The average consumption of drinking water in Santiago, in 1905, was of 40,300 m^3, corresponding to a monthly maximum of 46,930 m^3, and daily of 51,120 m^3, and to a monthly minimum of 33,900 m^3, and a daily of 30,448 m^3, or, that is to say, in the neighborhood of 100 liters a day per capita.

In view of the further needs of drinking water, required by the progress of the capital, and by future requirements of the sewer system, the Supreme Government appointed three university professors to report in regard to the future needs of the capital, which, according to the opinion of the Department of the Interior, should be at the rate of 300 liters a day of drinking water per capita.

This Commission, in a brilliant report that we have the honor to submit, as it contains valuable and interesting information regarding these services,

agreed, after having examined the works of Freeman, on drinking water in New York, those of Beechman on Paris, and those of the engineers that directed the works in Boston, Philadelphia and Cincinnati, that the distribution of water for a city like Santiago should have a minimum of 500 liters a day per capita, which would give a supply of 200,000 m³ for a population estimated at 400,000 inhabitants. This amount of water could easily be drawn from the hydrographic basins that surround Santiago, and still better, from the Laguna Negra or Vicuña Mackenna, located in the heart of the Andes range of mountains, for it is an immense and deep body of water, having a surface of 16 kilometers, and being at an altitude of 2,772 meters above the sea level. The Laguna Encañada, formed from filtrations of the first mentioned, is located at an altitude of 2,572 meters, and could also be exploited for the capital's use.

The quality of the drinking water of Santiago is always satisfactory; its temperature in the distributing reservoirs is not higher than 15 degrees or 16 degrees centigrade. Chemical analysis show that its salts are in a normal proportion to be drinking water; chlorine and ammoniac leave infinitesimal traces. Its classification is "very good."

The Hygienic Institute of Santiago has been making fortnightly, since 1894, six years before that of Paris, some bacteriological and chemical analysis of the waters on various samples taken from the reservoirs and from the spigots of this service at the aforesaid Hygienic Institute.

The number of colonies of bacteria has been, on an average, of 46 per cubic centimeter; in the analysis of former years, maxima of 204 have been observed in the summer and a maximum of 5, in winter, for the waters of Vitacura. Those of Ramón have had a maximum of 134 and a minimum of 8 colonies.

The coli bacillus is found three or four times during the year in the various fortnightly samples. The waters in Paris, in all its samples, show the presence of the coli bacillus.

The Eberth bacillus has not been found in the waters of Santiago.

In Valparaíso the Peñuelas Lake is the source of supply, and the consumption for a population estimated at 150,000 inhabitants, was only of 22,221 m³ of filtered water a day and 16,200 m³ of unfiltered water, used by the Electric Traction Company.

Iquique, Antofagasta and Pisagua have private sources of water supply, deficient for the present needs of their inhabitants.

The Supreme Government has sent a message to Congress, asking the authorization to spend three million dollars to supply the city of Iquique with splendid water which it abundantly possesses in the falls of Chintaquay and at the rate of 160 liters a day per capita. To-day the cubic meter of water costs $10.

In the annexes relative to the sewer systems is found a description of the cities which will be benefited with new services or improvement of those now existing, according to the project of the Executive, that disposes of £1,500,000 for Sanitation and water works.

In Annex V we publish a note of the Sanitary Inspection to the Hygienic Council, in which all the cities that possess drinking water are enumerated; those that require improvements, the works now under construction, and those under consideration. We also enclose a chart showing the distribution of conduits of drinking water in the city of Santiago.

Annex VI shows in a table the general supply of water, its origin, system of purification, and ration per day and per capita, in liters.

Annex VII is a memorandum of the Water Enterprise of Santiago, which reviews the history, antecedents and present condition of the water service.

SANITARY ORGANIZATION IN CHILE.

Sanitary Organization.

It is pleasing to state that during the period that has elapsed since the last Sanitary Congress, public sanitation in Chile has been the subject of special attention on the part of our Government, assisted by the Superior Council of Health.

The exotic epidemic of bubonic plague, the recrudescence of an epidemic of small-pox, demographic statistics showing high figures for the victims of tuberculosis, typhoid fever, etc., have impelled the authorities and the people of the country to unite their efforts for the purpose of attaining a high degree

of sanitation in our cities and to protect ourselves against diseases entirely foreign to our country. Unfortunately, an earthquake that, on the 16th of August, 1906, caused the loss of over two thousand lives, destroyed several towns, and occasioned a national loss of over 300,000,000 *pesos*, diverted the attention of the Government from public health, but now that the country has recovered to a certain extent from so great a calamity, the authorities have resumed their activity in prosecuting the work of sanitation with greater energy.

As stated by our colleague, Dr. Moore, before the First Sanitary Convention, we lack in Chile an executive board of public health charged with the control of the sanitary affairs of the country. As constituted at present, the Superior Council of Health is only an advisory board, and is not vested with the executive powers which high corporate bodies of this character should have.

But a reactionary movement has already been initiated. In 1906, the Government appointed a committee, on motion of the Superior Council presented by my colleague, Dr. Soza, composed of two hygienists, Doctors Lucio Córdova and Mariano Guerrero, Secretary and Counsel, respectively, of said board. This committee is entrusted with the preparation of a bill, organizing in the most perfect form and in accordance with the most modern methods of hygiene, the sanitary legislation of the country.

The committee referred to visited during the past year the principal nations of Europe and the United States of America in order to make a careful study of their sanitary laws, and it is now preparing its report and the proposed law that will be submitted to the consideration of the National Congress.

Another step originated by this reactionary movement was the Decree of January 25th, of the current year, whereby a Bureau of Public Health and Beneficence, under the Department of the Interior, was created. On the 29th of the same month, the Executive appointed Dr. Luis Astaburuaga, Director of said Bureau. (Annex VIII.)

Later on, the sub-department of health wanted by the medical institutions of the country, and for the creation of which a petition has already been made to the Government, will be organized. In the meanwhile, efforts are being made for the establishment of a Department of Public Health, which would be the most advanced and commendable step that a nation could take toward the cause of sanitation.

Judging from the interest shown by the Executive, and from public opinion, it may be assured that Chile will have within a short time a Sanitary Code which will be as complete as those of the nations most advanced in public health.

Complying, therefore, with the provisions of the program, we will state in this report what has been done during the past two years in regard to sanitary legislation and methods, adding a few brief details on the present condition of the health service of the country.

The Political Constitution of the Republic, in its provisions relating to sanitation, prescribes, in Section 73, that all public establishments shall be under the supreme supervision of the President of the Republic, in accordance with the special ordinances governing them.

Pursuant to Section 119, of the same Constitution, the municipal governments are charged with the sanitation, comfort, embellishment, and recreation of their respective cities, as well as with the care of hospitals, orphans and foundling asylums, penitentiaries, houses of correction, and other charitable institutions under the provisions of law.

A synopsis of the sanitary functions and duties of the Central and the Municipal Governments has been presented by the Superior Council of Health under the following paragraphs:

"In Chile the affairs relating to public health are entrusted to—

"(*a*) The Department of the Interior, and

"(*b*) The Municipal Governments of the Republic.

"(*a*) The Department of the Interior issues the sanitary ordinances and regulations relating to the sanitation of the country. In this respect, the Central Government has under its supervision all measures for the eradication of infectious diseases, and the land and maritime international sanitary police.

"For the adoption of such public health measures, as well as for the enforcement thereof, the Department is advised by the Superior Council of Health and the Institutes of Hygiene, both operating in the city of Santiago.

"For the execution of these measures in provinces and departments, the

Intendentes and Governors, officers representing the Chief Executive in their respective territories, receive orders and instructions from the Minister of the Interior. They are advised by the Departmental Councils of Health. For the enforcement of the provisions of Maritime Sanitary Regulations, the *Intendentes* and Governors in maritime districts are advised by boards of health, of which are also members the senior customs officers, and the physicians of the port.

(*b*) The municipalities, represented by the First *Alcalde* (Mayor), are entrusted with all matters referring to the public health and sanitary condition of towns. In this respect the local authorities have under their supervision the sanitation of streets, squares, parks, and other public places; the construction and maintenance of sewers; the protection of canals and aqueducts; the supply and distribution of water; the establishment and management of free public bath houses; the establishment and management of public slaughter houses; the regulation of bars, saloons, grocery stores, etc.; the regulation of unhealthful factories and industries, workshops, stables, and poultry yards; the encouragement of the construction of cheap hygienic dwellings; the adoption of measures for the prevention or eradication of epidemics; the organization of services of disinfection, etc.

"For the adoption of these public measures, the *Alcalde* is advised (1) by the Superior Council of Health, upon which all municipalities of the Republic may call for advice; (2) by the Departmental Councils of Health, presided over by the *Intendente* or Governor of the province or department.

"Some municipalities have established within their respective territories health bureaus, or chemical laboratories."

The Government, besides the general supervision which it exercises over all sanitary matters, has, in case of an epidemic, the right to enforce for a definite period, and the consent of Congress previously obtained, the Law of Sanitary Police, passed on the 30th of December, 1896. By virtue of this law, the President is empowered to close the maritime and land ports; to prescribe quarantine measures, compulsory disinfection of passengers and cargoes, and to adopt such other measures which he may deem necessary for the eradication of any of the epidemics specified in the regulations. The General Health Ordinance of January 10, 1887, specifies the sanitary measures that may be adopted by the authorities.

The General Board of Sanitation, which was created to advise the Government in sanitary matters, and to study and submit health and prophylactic measures, and the departmental boards of sanitation, were abolished on May 23, 1900, and the Superior Council of Health was organized instead thereof. The provincial councils of hygiene, established by decree of January 19, 1889, were also reorganized and subdivided into the present Departmental Councils which have been operating since the 10th of December, 1892.

The Law of Navigation, in force since June 24, 1878, and the Maritime Health Regulations of February 18, 1895, prescribe the measures of a permanent character that should be taken against epidemics; the inspection of vessels; the issuance of bills of health; the adoption of prophylactic measures that should be observed before, during and after the voyage; quarantine and examinations; sanitary stations, sanitary tariff, and the duties pertaining to sanitary authorities. (The Law of Sanitary Police and the Maritime Health Regulations referred to are contained in the report of Dr. Moore, published in the Transactions of the First Sanitary Convention of 1902, Annexes C and K.)

Sanitary Stations.

The Sanitary Station of Arica was established in April, 1905, on account of epidemic of plague that invaded the provinces of the coast of Peru. Its personnel consists of: 1 chief physician, 1 assistant, 1 bacteriologist, 1 mechanic, 1 disinfector, 1 clerk, 2 first class sailors, and 2 second class sailors; this personnel may be increased when necessary. The lazaretto is provided with a steam launch whereon is mounted a Clayton apparatus for the disinfection of vessels. It is proposed to have a land lazaretto built in the Port of Arica, for the hulk serving as lazaretto has been condemned recently The regulations governing the station have been approved by the Superior Council of Health. but have not yet been promulgated as law by the Government. In the meanwhile it is governed by the Maritime Health Regulations, the instructions from the Su-

perior Council of Health, and, in so far as it is practicable, by the provisions of the proposed ordinance.

The fees for disinfection of vessels vary from £5 to £20 in accordance with the tonnage thereof.

During the calendar year 1906, 204 vessels were disinfected; of this total, 103 were passenger vessels, and 101 freight, and passenger and freight vessels. 77 vessels used their own disinfecting apparatus.

17,022 members of crews, and 8,948 passengers were examined during the year.

New details regarding this service, and international data of interest, taken from the last report presented by the Director of the Sanitary Station at Arica, are given in Annex IX.

Sanitary Station at Punta Arenas.

A sanitary station was temporarily operated in this port, first from 1892 to 1893, and afterwards in 1903, on account of the apparition of an epidemic of cholera in Portugal; it is intended to make this station a permanent one, like the one at Arica.

Sanitary Organization of Cities.

The sanitary and beneficence services of the towns of the Republic is organized as follows:

A Board of Beneficence in each department performs its respective duties; in Santiago and Valparaiso it is composed of four members elected by the Municipality, four appointed by the President of the Republic, and the directors of the charitable institutions; in the provinces the number of elective members is reduced to one-half; these boards have the interior economic control of their dependencies, including their rents and the personnel of employees.

There is in each capital of a province or department a City Physician, appointed by the Municipality, who is entrusted with the medical and sanitary services of his locality. In smaller towns, capitals of autonomous communes, there are also physicians and dispensaries supported by the municipalities.

These organizations have also special physicians, called "Vaccinating Physicians," and "Judicial Physicians," appointed by the Executive, the former to render their services to the Vaccination Boards, and the latter to co-operate with the judicial authorities.

There are in several parts of the country physicians of small-pox lazarettos, who are under the Central Government.

Permanent lazarettos for bubonic plague exists in Pisagua, Iquique, Antofagasta, and Taltal.

The city physicians are *ex officio* secretaries of the departmental councils of health.

The port physicians perform the duties prescribed by the maritime health regulations.

There are in Chile many private medical services maintained by charitable institutions.

Sanitation at Iquique.

The Port of Iquique has a sanitary organization which does high credit to the Municipality that maintains it.

The sanitary service is attended to by two physicians and a municipal pharmacist. The municipal Chemical Laboratory, established in 1895, renders valuable services to the locality. The Director of this establishment has also under his charge other services maintained by the central Government, such as public and private disinfections, microscopical, bacteriological, biological laboratories, etc., etc. This laboratory is also provided with stoves and apparatus for disinfection.

The law making the declaration of infectious diseases compulsory is strictly enforced in Iquique. A physician was fined fifty pesos for his failure to make the declaration required by law. This case is cited for the reason that it is the only one that has occurred in the country.

The Municipal Chemical Laboratory supervises, besides, the sanitary inspections made by the Municipal Health Commission, which is composed of one

chief and eight inspectors, who examine the health conditions of the town, divided into eleven commissariats; these inspectors are also charged with the duty of reporting all cases of infectious diseases that come under their observation, and all deaths that might have occurred in the city every 24 hours, in order to enable the physician entrusted with the verification of deaths in time of an epidemic, to certify the causes of death. The municipality gives special attention to the sanitation and disinfection of private houses, the disinfection of street cars, public vehicles and trains, and to the supervision of slaughter houses and houses of prostitution.

All cases of tuberculosis must be declared in Iquique.

The Municipal Chemical Laboratory furnishes the public, free of charge, the following serums and vaccines: Haffkine anti-small-pox vaccine; Yersin anti-plague serum; Yersin anti-diptheria serum; tuberculin, and virus against rats.

In Annex X is contained a resumé of the sanitary organization and demographic statistics of Iquique, furnished by the Director of the Municipal Chemical Laboratory, Dr. Amador Guajardo.

Sanitation in Antofagasta and Taltal.

In Antofagasta, the sanitary work is entrusted to a Bureau of Health; this bureau is provided with a disinfecting stove and a Clayton locomobile for disinfections; it has under its charge the lazaretto for bubonic plague and small-pox. The regulations governing this bureau are instructions issued by the Institute of Hygiene, approved by the Board of Beneficence and promulgated by the *Intendente* of the locality. The efficient activity of this new institution has checked the progress of typhoid fever and small-pox, which, besides being endemic diseases in that section of the country. were a constant menace to the neighboring ports.

In Taltal, on account of an epidemic that broke out in the latter part of 1906, a Bureau of Health, similar to that of Antofagasta, was established; this bureau however, is not yet so well equipped as that of Antofagasta.

Other Cities.

Talca.—Besides the service maintained by the Central Government in provincial capitals, the city of Talca has a sanitary organization of its own, of which the Bureau of Municipal Health Inspection is in. charge; this office is composed of a physician and a chemist, and has under its charge the microscopical and chemical laboratory.

Concepcion.—This city has also a sanitary service independent from that maintained by the Government. The inspection of liquids, beverages, food products, meats, epizooty, dwellings for laborers, charitable institutions, etc., are the principal functions of large cities in respect to sanitary matters, the Central Government helping them in proportion to their needs.

Valparaiso and Santiago.—Sanitary work done in these two principal cities of Chile by the Councils of Health, is worthy of high praise.

During the past two years, sanitation, in all its aspects, has received a great impulse.

The reconstruction of Valparaiso includes sanitary works, in the city and the houses, in accordance with modern methods of sanitation.

The public medical assistance is being greatly improved from day to day.

We have the honor to submit to the Delegates the minutes of proceedings of the Departmental Council of Health of Valparaiso, containing a resumé of the sanitary conditions of that commercial metropolis, and a description of the many and varied labors executed by the city on behalf of public health. Other documents, which are also enclosed herewith, describe the sanitary conditions in Santiago, the capital of the Republic, where, together with the improvements made by the Government, the Municipality has established numerous services such as that of municipal medical assistance, with two physicians, the sanitary local inspection, the inspection of liquids and food products, slaughter houses, houses of prostitution, etc.; a chemical and microscopical laboratory of the first class, free public dispensaries, ocular, gynecological, and other institutions, etc., etc.

It is proposed to unite all these services, making them a great polyclinic center.

The "Revista Chilena de Higiene" (Chilean Review of Hygiene), the "Boletín

de Higiene y Demografía" (Bulletin of Hygiene and Demography), and the "Actas del Consejo Superior de Higiene Pública" (Minutes of the Superior Council of Public Health), accompanying this report, are the best evidence of our efforts to place our country in the same high position occupied by the most advanced nations, and contain numerous statistical data showing the extent of our sphere of sanitary action.

The Superior Council of Public Health and the Institute of Hygiene.

We will close this brief monograph of our sanitary organization, making a description of the constitution and scope of work of the Superior Council of Public Health and the Institute of Hygiene.

The Superior Council was created by law of September 15, 1892, together with the Institute of Hygiene; both institutions are under the control of the Department of the Interior. The former is composed of thirteen members, their term of office being three years. Seven of them are appointed directly by the President of the Republic, three elected by the Municipality of Santiago, and three by the Council itself. Among the persons appointed by the President, there is an engineer, an architect, and a high officer of the national army or navy. The Director of the Institute of Hygiene and the chiefs of divisions thereof are also members, but have no right to vote. One of the members of the council must be a lawyer. The Superior Council advises the Government on all sanitary matters, and it is its duty to study, and suggest to the authorities, all questions relating to the health of the inhabitants, in all the spheres of action and to the fullest extent authorized by the Constitution and the laws of the Republic. (See Annexes E, F and G, to Dr. Moore's report to the First Sanitary Convention.)

The Institute of Hygiene has now five divisions, to wit: Hygiene and Demography; Microscopy and Bacteriology, Chemistry, Seroterapics and Disinfection. These last two divisions were created by decree of September 9, 1896.

The Division of Hygiene and Demography publishes the bulletin in that name, and is in charge of all matters pertaining to hygiene throughout the country; the Chief of this division is the Director of the Institute, who is also the editor of the "Revista Chilena de Higiene."

The Divisions of Microscopy and Bacteriology, and of Chemistry, make analyses of those substances the composition of which may have influence on public health. The materials to be analyzed are those sent by the administrative authorities, those selected by the office, and those furnished by private individuals; it also makes such studies as may be ordered by the Superior Council and the Director of the Institute.

The Division of Seroterapics is charged with the preparation of the anti-rabies vaccine, the anti-diphtheric serum, and the Trunecek serum. It was annexed this year to the Institute of Animal Vaccine. The necessary funds have been appropriated for the preparation by this division of the anti-plague serum.

The public Disinfecting Station renders valuable services to the city, and its chief has under his control the other disinfecting stations operating in the country. In another chapter of this report, my colleague, Dr. Soza, describes the present condition of these establishments.

Sanitary Inspection in the Republic.

This new division of the Superior Council was created by law of September 28, 1896. (Annex XI.)

Sanitary inspection is exercised throughout the country; it investigates unhealthful influences, supervises the sanitary conditions of factories, workshops, tenement houses, buildings, and public places; it is the duty of sanitary inspectors to report to the Superior Council all omissions or deficiencies which they may find in any of the branches of the Government in regard to public health, and to suggest the means by which such omissions or deficiencies can be remedied. Inspection of houses in cases of infectious diseases, for the purpose of taking sanitary or disinfecting measures, or of investigating the causes of inspection, or of giving the dwellers instructions in sanitary measures and the application of special hygienic rules, are duties which the sanitary inspectors perform with great benefit to the public in general.

The tables contained in Annex XII show the number of sanitary declarations and inspections made in Santiago during the year 1906.

It is to be regretted that the limited number of these inspectors—there are only two for the whole country—prevents them from extending their functions. We suppose that the new project of sanitary legislation will increase the number of these inspectors, the lack of more of which has been made manifest by the last epidemic.

The Division of Sanitary Inspection is also charged with the preparation of the "Sanitary Table of Santiago," a special register in which are recorded, by blocks, the plans of each building, with a statement of its sanitary conditions, alterations that should be made, conditions around the neighborhood, and cases of infectious diseases that have been reported to the Institute of Hygiene.

The Sanitary Register of Santiago is a work of great importance to the prophylaxis of the capital and which does credit to its authors.

Annex XIII contains a form of these tables. In Annex XIV is a statement of the services rendered gratis, and for compensation, by the Institute of Hygiene, and which shows the work done by this institution in behalf of the public welfare.

HARBOR AND SEWER WORKS; DISINFECTORIES; DWELLINGS FOR WORKINGMEN; IMMIGRATION; SLAUGHTERHOUSES, AND SANITARY SERVICE OF AN EARTHQUAKE.

In methodical pursuance of the indications contained in the provisional program that served as a basis for our Report, we beg to refer to paragraph (b) which says: "A report on the condition of the ports of his country, specifying the works which may have been executed therein, those in course of construction and those which are projected, as well as the manner in which the problem of water supply, proper sewerage and of the connection of house drains with that system of sewers has been resolved, as well as the methods that have been employed or are proposed for the sanitation of the dwellings."

PORTS.

In Chile we have, in this respect, no work under construction; but there are some projects that are under consideration for the ports of Mejillones, Antofagasta, Valparaíso, Constitución, Coronel and Valdivia.

In annex A will be found some laws and other data, among which the following will be observed:

1st. A decree of April 7, 1906, by which an approval is made of the plans of the city plant project and of the improvement of the port of Mejillones, in which it is ordered that a message to the National Congress be sent, requesting that the minor port already mentioned be raised to the main class.

2d. Law No. 1835, of February 12, 1906, authorizing to contract a loan of (£1,500,000) *one million five hundred thousand pounds*, sterling, in order to carry out the defense works of Valparaíso, sewer work of Talca and Concepción and supply and improvement of the water works of various cities.

3d. Law No. 1816, of February 13, 1906, authorizing an expenditure for the construction of improvement works of the port of Antofagasta.

4th. Decree of June 19, 1906, authorizing Messrs. Gustavo Ried and Julio Torrealba for the construction of harbor or interior basin at Constitución.

SEWERS.

Their present condition in Chile is the following: *Modern Sewer Systems in Working Order:*

Iquique.—Estimated population in 1905, 43,500 inhabitants. It has a network of water conduits of small diameter for refuse water. The draining is made with sea-water, mechanically raised and distributed through a special network. It never rains here, which fact, consequently, was taken into consideration. (Annex B.)

Valparaiso.—Estimated population in 1905, 150,962 inhabitants. The separate system is employed. The refuse waters go through a special network, and are raised mechanically (4.50 meters) to empty in the sea. There are great trenches, normal to the coast, that collect the rain water of the city, as well as that of the

mountains surrounding it. Presently more than three-fourths of the city is provided with a special drainage network, and the remainder is contracted for.

SEWERS UNDER CONSTRUCTION.

Santiago.—Estimated population in 1905, 400,000 inhabitants. The drainage project is based on the unitary system; the plan of the network has been designed in a zig-zag form, and continuous drainage has been adopted. The refuse waters go by gravitation to the Mapocho River. The network has a total spread of 304 kilometers. The amount to be paid as per contract is $16,785,000 gold of 18 pence, of which amount the sum of $3,730,000 is allotted for the enlargement and improvement of the water service and paving.

Annex C shows us a plan of the city of Santiago with its sewer and drainage system, which, as it will be seen, joins the waters of the Mapocho River. In the sewer system, the interior dimensions vary from 0.30 m. to one meter. The concrete collectors, from 0.90 cm. to 3.50 m., the inferior ones being ovoid in shape, for a length of about one meter and seventy-five centimeters, and those of larger size than the above mentioned, have a cylindrical shape.

It was the object of a careful study, to determine whether the ovoid profile should be placed with its sharpest end in the upper or in the lower parts. The result of this investigation has been to select the broad side to be placed at the base and the thinner on the top, which has, among other things, the following advantages: Greater resistance, easier access, and, because of a smaller radius, it is comparable to that of the circular profiles, that precede or follow the ovoid, and there is more harmony between them.

The drainage system starts with a dimension of one meter and ends with one of 0.25 cm. The accepted drainage system has a necessary capacity to carry the refuse waters of a population that, in the future, it is supposed will be double of the present; that it may carry a rain considered as regular fall at Santiago, the intensity of which is of 70 liters per second and per hectare. Heavier rainfalls, as an average, occur once a year.

Illustration No. 9, of the Annex, shows that the greatest rainfall under observation is that of June 16, 1902, in which case it reached an intensity of 80 liters per second and per hectare, for nearly two minutes.

Modern European canalizations are not constructed with a capacity to carry the heaviest rainfalls that have occurred or that may occur in the future; this would lead to the construction of gigantic works that very few cities could afford to carry out, and no proportional advantages could be derived therefrom; if such a sewer system should be constructed to have a capacity for the heaviest rains recorded in Santiago, many millions would have to be spent to save the city for a few hours of a century of troubles of less magnitude than those it endures today in winter time. Due to many causes; percolation, retention in the irregularities of the soil and lower planes, existence of absorbing wells, evaporation, etc., etc., the rain that reaches the canalization is less than the volume of the fallen rain in a proportion of about half, as may be seen in illustration No. 13 of the Annex.

According to the latest Annual Reports of the Water Enterprise, relative to the influence over the consumption, the improvements of the drainage network, and the establishment of the sewer system, for 1910, the consumption of 120 liters per day and per capita has been accepted. For the maximum refuse water in the future, taking place simultaneously as the maximum rainfall, which determines the capacity of the network, 300 liters per day and per capita has been accepted, supposing that the maximum consumption in 24 hours is double the average.

As annex, I also accompany a resumé of the final project relating to the regulations governing the dwelling installations.

Viña Del Mar.—The Illustrious Municipality has contracted with the firm of Hughes and Lancaster of London regarding the construction of the city drainage.

SEWER SYSTEMS, FOR WHICH BIDS HAVE BEEN ASKED.

Concepción.—Said bids are being considered.
Talca.—In March, 1908. A description and plans may be examined in Annex D.
Antofagasta.—In October, 1908.

SEWER SYSTEM PRESENTLY UNDER CONSIDERATION.

Of Pisagua.
Of Copiapó.
Of Curicó.
Of Chillán.

As annex (E) will be found a table containing statistical data showing the percentage of deaths due to tuberculosis and typhoid fever in 1900, because it is the year in which complete information could be had for all the cities over 10,000 inhabitants. In tuberculosis the percentage has fluctuated between 8 and 10 per cent out of the general death rate. Regarding typhoid fever the variable cases have been the most intense, betwen 1 per cent at Santiago and 25 per cent recorded at Chillán. This enormous death rate was due to a great epidemic which occurred in that year. In 1904 it was lowered to 2 per cent, but a new epidemic in 1905 raised the percentage to 21.

In that table an observation may be made as to the present drainage systems in the various cities of that Republic having a population of more than 5,000 inhabitants. Out of 32 cities, 12 have drain trenches; 11 absorbing wells; 2 sewer system, and 1 drain canals.

The construction of sewer systems has begun in the most important cities, and where needed the most, in such a way, that the day is not far distant when all the 12 cities will have a complete sewer system.

PUBLIC DISINFECTORIES.

There are now, in readiness, to be distributed to various cities, 9 Geneste-Antofagasta, Coquimbo, Lerena, Valparaíso, Santiago, Curicó, Talca, Chillán, Concepción and Punta Arenas.

A disinfectory heater has also been delivered to San Bernardo and another to Los Angeles, which will soon be put in operation.

There are now, in readiness, to be distributed to various cities, 9 Geneste-Herschel heaters and two of the Clayton type.

The Director of the Santiago Disinfectory, from which the other disinfectories of the Republic are dependent (see Annex F. 1), has proposed, in a communication of August 20, 1907 (Annex F. 2), to distribute them in the following cities: At Arica, in order to complete the equipment at the disposal of the Sanitary Station of the North, installing as an annex to the pest house a public disinfectory that may also be useful to the needs of the same station; 2d, at Pisagua; 3d, at Talca; 4th, at Ovalle; 5th, at San Felipe; 6th, at Viña del Mar, 7th, at Coronel; 8th, at Valdivia, and 9th, at Puerto Montt.

In 1905 (Annex F. 3) the Illustrious Municipality of Santiago enacted a decree ordering the disinfection of carriages in public service, every two weeks.

DWELLINGS FOR WORKINGMEN.

One of the subjects that worries most the society of Santiago is the dwelling and the mode of living of the poorer class.

Private initiative is, to a great extent, responsible for the progress attained in this particular, at least in the city of Santiago. There are many towns that recently have been founded on these bases, and in which the small, secluded, dark, moist, etc., room has been replaced by independent living quarters, well ventilated, dry, and exposed to light. Such is the case with the towns of Pío IX, Ovalle, León XIII, and many others.

The Supreme Government, on February 20, 1906, enacted a law that creates *"Councils for Workingmen's Dwellings"* (Annex G), which are departmental councils, and Superior Council that seats at Santiago and is also the Council of that Department.

For this purpose the sum of $6,000,000 was voted.

IMMIGRATION.

Long before the earthquake it was observed that there was a scarcity of help in the center and the south of the Republic. This was a cataclysm in which were torn down many houses, and in some towns, like Limache, all of them.

It was already a year since the paving and sewer works required a great number of workingmen.

By the middle of this year, the Minister of the Interior sent a circular to the Intendants and Governors, requesting them to furnish statistical data as to the scarcity of workingmen in the various industries and agricultural works of the central and southern zones. After due consideration of the matter, in the localities, the authorities made an estimate of the actual and urgent need of workingmen, and it was found by the alluded officials that 40,000 men were necessary for various industries in that Republic.

Wages were very high in Santiago; they were doubled to start with, and quadrupled in other places, like Valparaíso.

The Government did not lose any time to promote immigration in order to find a solution to this alarming state of things.

A year prior to the earthquake, on June 24, 1905, it had put into effect a regulation for free immigration (Annex R. 1).

With the purpose of extending this service and in order to draw the best possible benefits from it, it put in effect, on September 25th, of the current year (Annex K. 2), a new regulation, much more complete than the previous one, by which an office, dependent of the Ministry of Foreign Relations, is created in Europe, and called "General Agency of Immigration," with the following personnel:

1 General Agent.
1 Secretary and Treasurer.
4 Special Agents with fixed residence.
12 Sub-Agents.
4 Doctors, and
10 Commissaries.

The Sanitation, either in connection with the personnel of the public immigration, or with regard to the public hygiene are duly taken into consideration in the program and regulations of immigration. A medical staff *ad hoc* will prevent the arrival in the country of weak or feeble persons, or those suffering from contagious diseases.

The arrival of immigrants during the last three years was as follows:

1905	293
1906	1,221
1907, up to Sept., inclusive	4,828

SLAUGHTER HOUSE SERVICE.

These services have also been the subject of special attention during the last two years. On August 14, 1905, the Government enacted a law ordering the reconstruction of the slaughter house of Valparaíso (Annex I), according to the latest hygienic exigencies. In September last, one of its section was put in operation.

In Santiago, two projects on model slaughter houses have been submitted to the Municipality, but this Corporation, so far, has not taken any decision.

SANITARY SERVICE OF THE EARTHQUAKE OF 1906.

Before concluding this section, we must take up a subject that deserves to be considered, viz: the public assistance at Valparaíso in the days following the catastrophe of August 16, 1906.

These grave circumstances required very severe measures to be taken, dwellings were demolished, tombs and coffins were opened in the cemeteries, 2,000 corpses in state of putrefaction among the demolished drain trenches; everything tended to menace the spread of patogenic elements that would have as an easy prey an exhausted people, without shelter and without proper food.

The corpses of the cemeteries or those that accumulated in public places were covered with quicklime. The scarcity of transportation facilities in the mountains made it necessary to cremate, by the hundred, those that were found in such places.

It was also necessary to cremate or to bury a great number of animals found in the ruins, especially in the Central Livery Stables.

People lived in public places, avenues and broad streets that soon became foci of infection, due to lack of drainage, urinaries and water closets; this cir-

cumstance being remedied with the immediate construction of drainage conduits and numerous water closets.

A special party was charged to daily visit and clean those closets, leaving them in good condition and properly disinfected. Each encampment had a special place designated for the accumulation of garbage. Ten days later, that is, on August 26th, it was estimated that 20,000 persons were living in improvised encampments.

The streets were watered with solutions of copper sulphide or iron; the drain trenches with cresol and phenol, and the garbage was burned.

The Sanitation personnel had also to interfere in the hygiene of tents, bowers, houses, dispensaries and hospitals.

The service for drinking water was also promptly established, by placing a great number of spigots in each encampment.

The number of dead was more or less 2,000, which is, for a population of 150,000 inhabitants, at the rate of 1.33 per cent, or somewhat greater than that of San Francisco, Cal., in which catastrophe 452 persons died, out of a population of 350,000, which is at the rate of only 0.12 per cent.

The number of wounded in that port reached 3,800. Annex J graphically shows us that those wounded in the head and hands were greater in number. Fractures occurred especially in the knees, and next in the feet, and, finally, the greatest number of dislocations were mainly of the shoulders and then the ankles. Full information regarding this service can be had in the booklet entitled "Medical Service of an Earthquake," that in the name of my distinguished colleague, Dr. José Grossi, its author, I have the honor to present you with a few copies.

REPORT OF DRS. GENARO PAYAN AND RICARDO GUTIERREZ LEE, DELEGATES FROM COLOMBIA.

Unfortunate circumstances foreign to the will of our Government were the cause that prevented Colombia from participating in the previous Pan-American Conventions that were held in Washington.

But on this occasion to which she has again been invited she sends her Delegate and hastens to take part in the transactions of this Convention whose beneficial results for the Continent and the West Indies are palpable.

It has been, and it is, an arduous task for Colombia to carry out the provisions of modern public hygiene because her position in the center of the Torrid Zone, the topography of her land abundantly provided with valleys irrigated by numerous rivers, with high mountains and extensive coasts on both oceans, whose territorial area covers four hundred thousand square miles, still lacking in adequate means of communication and having scarcely five million inhabitants, the action of the Health Department has not yet been felt with all its force; the Republic has, however, in some of her ports means for the preservation of public health at any given moment.

It was thus, that during the two years that the Bubonic plage ravaged the coasts of the Republic of Peru, we were able to completely protect ourselves against said disease although the important shipments of salt from Paita and Sechura to the Colombian Ports of Buenaventura and Tumaca had never been interrupted.

Neither has yellow fever appeared in our coast for some time although the ports are situated in a latitude appropriate for its development, and in spite of the fact that in certain seasons of the year we have considerable number of *Stegomia Fasciata* which are entirely harmless due to the absolute lack of the virus in the country.

On our Atlantic coast where the commercial and immigration movement is greater, a few exotic cases appear which are never propogated among adult natives but among non-acclimated foreigners and among children although in a benign form; the acute cases are called *Borras* Fever.

In the interior we have very few cases of yellow fever which only appears when large movements of population from the mountains to the valleys take place, under circumstances that modify totally the customs, climate, food of, and cause an unhealthy condition among the inhabitants of the highlands, where not one single case of the disease has been recorded.

One of the really alarming diseases which has hindered our progress so much

is malaria which, appearing under the most varied and serious forms, produces the greatest mortality among the inhabitants of the regions which are overflowed by rivers during the rainy season, and also among those of the seacoast.

Malaria has been an obstacle to the foreign immigration that our country needs so much. It makes men apathetic and lazy.

Such a serious disease has always attracted the attention of the Government, and of the entire country, for which reason the greater part of the sanitary legislation in force refers especially to that subject.

Intestinal diseases of various forms are also frequent in Colombia, such as *Enteritis, Enterocolitis,* and dysentery, which appears in an epidemic form; hepatic diseases, as a complication of the intestinal ones end usually in serious hepatic attacks and Cirrosis under all its forms. Acute jaundice appears frequently in the more torrid regions. On the other hand, typhoid fever is endemic in the temperate regions and in the cold highlands with the same forms, variations, and complications under which it exists in Europe and with the same laboratory reactions that are known today. Together with this fever there are the Colibaccilar ones, undefined, which may be mistaken for the former when practice and a close clinical observation fail to give the proper differential diagnosis.

Along the banks of the Magdalena and Patia Rivers exists also the disease known as *Leucemia* or *Leucocitemia,* mistaken for acute anemia, and characterized by *Hipoglobulia* in its extreme degree and hypertrophy of the (?) which is enlarged to ten times its normal size.

Tetanus occurs in hot climates especially among the newly born or in traumatic cases, and frequently by reason of the introduction of the *Pulex Penetrans.*

Tuberculosis plays an important part in the Tropical Zone but not in the highlands where it is unknown and where those suffering therefrom take refuge in seeking health.

Boxio, in the same form under which it is observed in Switzerland and in some provinces of Spain, exists in families and towns of some valleys, and it is not uncommon to notice in some of the persons suffering therefrom Basedow's disease with cardiac complications.

The skin disease known as *cárate,* which is characterized by a change in some parts of the pigment of the human skin, and gives the patient varied colors (blue, pink, black, and white) who then has a most peculiar appearance. It is believed that this Colombian disease is caused by the bite of a certain mosquito that exists in the mountain regions and which has the power of planting and transmitting the parasite of the *cárate,* studied by Doctor Montoya y Flores, Professor of the University of Bogota, who a few years ago addressed a communication to the Academy of Sciences of Paris in regard to said insect.

Bubonic plague, beriberi, cholera morbus, and trachoma are diseases still unknown among us, on account, perhaps, of the limited immigration into our country. According to the scientific methods established, the hygienic and sanitary institutions of the country will enforce the sanitary regulations in order to prevent the transmission of said diseases.

We make mention of leper, at the end, because this is a disease that is being extended throughout the tropical world in a very alarming way, and which exists also in our country.

The many cases that have been observed, and about which the press, reports, pamphlets, and dermatological books have given exaggerated, and even false, statistics, have hindered our national progress, in regard to immigration, commerce, and industry. The Government has now adopted the necessary measures to isolate, and treat in the most scientific manner, the patients that are lodged in the leper hospitals in two of the departments of the country. Said hospitals are under the management of special boards, and are generally supported by the Federal Government.

With the detailed report that we will file with the Secretary of the Convention in due time, we will enclose the sanitary and quarantine laws of Colombia, about which we must state that they are in conformity with the principles of the conventions concluded at Washington and Paris.

To conclude, we will say that Colombia has already organized in an adequate manner her public health service. There is in the capital of the Republic a Central Board of Hygiene, and departmental boards in the capitals of departments, besides a Maritime Health Officer in each port. All the boards referred to, as well as the Medical Corps of the Army, and the leper hospitals, are under the supreme supervision of the National Executive Power.

REPORT OF DR. JUAN J. ULLOA, DELEGATE OF COSTA RICA.

Having been appointed by the President of Costa Rica, Lic. Don Clemente González Víquez, to represent the Republic of Costa Rica at the Third International Sanitary Convention, and for which I have been granted full and complete powers, I have the honor to submit to your consideration the following summary of the report referred to in the provisional program of the Convention, and which comprises the period between the 14th of October, 1905, when the important Sanitary Convention of Washington adjourned, and the present date.

1. The Provisional Program. Fortunately during the period of time to which this report refers, we do not have to record any epidemic of the bubonic plague, yellow fever, cholera, beri-beri, or trachoma.

Malaria does cause serious ravages in some parts of the country, and more particularly in the low and hot regions of our Atlantic and Pacific Coasts. There is no doubt that malaria is the greatest enemy we have to combat in our countries, and that the various forms of this disease and its complications are the principal cause of mortality in the tropical nations of America. Let us declare relentless war against the anopheles, which are the principal transmitting agent of malaria, and let us recommend to the governments of this Continent the adoption of efficient measures against this enemy of mankind, and we shall thus take a great step in the way which will lead us to the best sanitation possible of the bad sanitary conditions of a great portion of the American Continent.

During the years 1906 and 1907 the sanitary condition of Costa Rica, as shown by the numerous reports which I have received from medical officers in the different sections of the Republic, which form the basis of the report I now have the honor to submit to you, and some of which you will find in the appendix thereto, was satisfactory.

Apart from the evils incidental to malaria, to an epidemic of typhoid fever, which broke out in the city of Grecia in the early part of the current year, and owing to the ignorance of the people concerning the proper diet and care of the children, and to the evils caused by quacks, we ought to be thankful for the favorable sanitary conditions prevailing throughout the Republic.

If we bear in mind that 72 per cent, more or less, of the mortality in Costa Rica occurs among children of less than five years of age, the importance of remedying the evils to which said mortality is due will be readily understood, said evils being none other than poor diet, deficient clothing, and the lack of the proper medical attendance, owing to the ignorance of the people who prefer quacks to qualified physicians.

It is very gratifying to me to state here that, thanks to the measures adopted for the destruction of the mosquitoes of the *stegomya calopus* variety, and to prevent their propagation as well as those recommended by modern science for the proper isolation of the first cases, the sanitary conditions of our Atlantic and Pacific regions have been excellent so far as yellow fever is concerned, a disease which seems to have already been banished from said fields. During the year two or three cases of said disease occurred on the Atlantic coast, but the actual extermination of the infectious foci prevented the danger in due time, and the cases to which I have referred were entirely isolated cases.

(*b*) Several important improvements have been introduced in our ports of Limon and Puntarenas in order to improve their sanitary conditions. Their respective municipalities, efficiently aided by the National Government, have taken great care to improve the condition of their streets, their systems of water supply, the system of drainage of the town, and the sanitation of dwellings and public buildings.

Maritime sanitation has been put in practice with proper precautions, and vessels and passengers coming from infected ports having been subjected to quarantine in the strictest manner, and in accordance with modern methods.

The macadamized streets have been extended at Port Limon, the drainage system has been improved, as well as the water supply mains, and important improvements are now being carried out in both systems, one of which will be the proper connection of the drainage system of the houses with the sewer system by means of iron pipes.

The National Government has provided both ports with fumigating apparatus of the Clayton type, which have rendered excellent service in the disinfection of

houses and of some vessels. These apparatus are of the H type, and, together with their corresponding steam motor, are easily transported to the place where they are needed, by means of the wheelbarrows on which they are mounted. I have seen these apparatus in operation and am entirely convinced of their efficiency for the destruction of rats, mosquitoes, bedbugs, fleas, and other kinds of insects. The gas which they produce is trioxide of sulphur, which, before it penetrates the dwellings through the proper pipes, is cooled down through coiled tubes through which cold water circulates, which constitutes a part of the generating apparatus. This machine is a double action apparatus, and is used for extracting the air from dwellings and vessels before the sulphurous gas is introduced therein, and is also used to inject pure air after the disinfection takes place. It seems that said gas does not injure fabrics or furniture. At present these apparatus are used in several of the American countries, and I believe that they can be conscientiously recommended to those countries that have not yet adopted them.

At Puntarenas, and especially at Port Limon, we have two quarantine stations which, though somewhat deficient, render good service. The Government which I have the honor to represent, proposes to construct at the Island of Uvita, situated opposite Port Limon, and about a half mile distant therefrom, the necessary buildings for establishing there a quarantine service, in accordance with the plans which I had the honor to submit last year, as a consequence of the Commission with which I was entrusted. A suitable installation for the quarantine service of the port of Puntarenas will also soon be made.

(*c*) One of the most praiseworthy achievements of the present administration of Costa Rica has been the earnest support and efficient help which the National Government has rendered to the different municipalities of the Republic for the purpose of improving their sanitary conditions, and, more especially, for the laying of the systems of water mains for the potable water supply. Since the present administration has been in control, it has efficiently helped the construction of at least ten water mains, and there are more under construction. The Government has promised to help other towns along these lines.

One of the most important improvements about to be undertaken is the extension and improvement of the water mains of San Jose, and the general system of sewers in the same city. These works will cost approximately $1,000,000. Lately the sanitary conditions of the capital of the Republic have been considerably improved, and the new boroughs that are being opened for the extension of the town, are put in good sanitary condition before buildings are constructed thereon.

In the other principal cities of the country, important sanitary improvements have also been introduced.

(*d*) Since the 14th of October, 1905, several sanitary police laws have been promulgated, as you will see from the respective appendices.

The most important provision made in the sanitary branch of the Government was the ratification, by the National Congress, during its regular sessions of 1906, of the International Sanitary Convention held in Washington on October 14, 1905, by the representatives of the governments which participated in the Second International Sanitary Congress, and which will be the law to govern in the important matter of sanitary police of the American Continent.

Quarantine was declared against vessels coming from the port of Havana, on account of the cases of yellow fever, which, unfortunately, occurred lately in Cuba, as well as inspection quarantine against vessels coming from San Francisco, Cal., owing to the bubonic plague prevailing in said city.

Special measures have been taken against tuberculosis, syphilis and the morphine habit.

2. The practical methods which I beg to suggest in order to prevent the transmission of tuberculosis in traveling vehicles, are those which are already known and accepted generally, namely: the proper disinfection of railroad cars and the staterooms and berths of vessels. The provision of portable cuspidors, punishment by heavy fines of persons who expectorate on the floor of cars, berths, etc., and the thorough and careful disinfection of all the utensils employed by consumptives or those who are suspected of being afflicted with tuberculosis.

4. The organization of a commission composed of three physicians, or health officers, intended to constitute a part of the International Sanitary Information Commission of the American Republics, may be entrusted, so far as Costa Rica is concerned, through the National Government, to the medical faculty, which

is the advisory authority of the country, in matters relating to sanitary measures or sanitary police.

5. It seems to me that the establishment of the Bureau of Sanitary Information of Montevideo, in accordance with the provisions of paragraph 3 (*c*) and paragraph 4 of the resolutions adopted in Rio de Janeiro, is very desirable.

6. I also consider very important the establishment of relations between the International Sanitary Bureau established in Washington and the International Sanitary Office of Paris.

GENERAL REPORT PRESENTED BY DRS. HUGO ROBERTS AND JUAN GUITERAS, DELEGATES FROM CUBA.

The provisional programme for this Convention, to which I have the honor of belonging, includes a memorial by the Delegate of each Nation, which shall contain a report respecting the contagious and infectious diseases prevalent in his territory, as also the conditions of the ports, the aid furnished by the Government to the Municipalities or States, and the Sanitary Police Laws promulgated after October 14, 1905.

Allow me first to occupy myself with our sanitary organization, for once understanding what we might term its "anatomy," it is much easier to interpret its functions and also to judge of its results.

In Cuba, the superior sanitary body is the National Sanitary Board, composed of members of the Sanitary Administration, including a Lawyer and an Engineer, as advisers on technical questions.

Not only does this Board exercise supervision over all sanitary matters, but it is also a Consulting Board for all hygienic questions; its President is the Chief Sanitary Officer.

On this basis, the service is divided into two important branches: the Quarantine Service or that of external defense, and the Interior Sanitary Service, whose object is to afford internal protection.

QUARANTINE SERVICE.

The object of this service is to compel the carrying out of the Quarantine Laws and Regulations, the same being in force in the United States of America at the time they were promulgated in Cuba; these, later on, were modified in order to adjust them to recent advances in science. In order to reap the great advantages obtained in taking all measures as promptly as possible, the Law provides what must be done by all vessels in an infected locality and also the measures to be adopted by the same at sea, should a quarantine case occur on board; and furthermore the requirements to be observed in Cuban ports, should sufficient precautions against the transmission of the epidemic not have been taken at the port of sailing.

The introduction of all epidemic disease should be prevented, and especially those termed quarantinable, being the following according to our law: yellow fever, plague, cholera, small-pox, leprosy and typhus.

Although this law does not make a final classification of vessels according to their sanitary conditions on sailing from or arriving at a port, still the standard accepted in Cuba, allows us to classify them under three heads: "Infected," "Suspected" and "Indemne."

An "Infected" vessel is one on which no precautions have been taken on sailing from an infected port, thereby accepting the possibility of the existence on board of the pathogenic agent, which, until destroyed, might, at any time, infect some person on board. These vessels on arrival at Cuban ports are fumigated, and the crew and passengers detained for a time covering the incubation of the disease in question.

A "Suspected" vessel is one which, though sailing from an infected port, by having observed the required precautions, the possibility of its having on board the pathogenic agent, cannot be entertained, nevertheless, some person on board might be in the incubative period of the disease acquired by infection during the stay of the vessel in the infected locality. Such ships are not fumigated in Cuba, but the personnel is detained in Quarantine during the period of incubation of the disease; the said period begins to count from the last moment in

which they were exposed to the disease, that is to say, from the time they left the infected locality.

An "Indemne" vessel, in the true acceptance of the word, which means: "exempt from harm," is one on which the existence of a pathogenic agent cannot be entertained, and on which the passengers and crew could not possibly be in the incubative period of any disease, either because no quarantinable disease existed at the port of departure or because all proper precautions had been taken before sailing.

It is therefore easy to understand that a ship changes from an "Infected" to a "Suspected" class by fumigation, and from "Suspected" to "Indemne," through the course of time; that the appearance of quarantinable disease on board a "Suspected" ship, immediately changes it or part of it into an "Infected" one, which may through fumigation again be turned into a "Suspected" ship.

This was the opinion sustained by the delegates of Cuba to the Second International Sanitary Convention, held in Washington in October, 1905, and in conformity with said opinion, Regulations were made for our defense against Yellow Fever.

On the 8th of last May, the resolutions adopted by the above cited Convention were promulgated and put in force by the Honorable Provisional Governor of Cuba; and, the requirements contained in Chapter I, Articles I, II, III and IV, by which it is obligatory to report not only the first appearance of confirmed cases of Plague, Cholera or Yellow Fever in the country, but also to remit a detailed account of the locality where the case or cases appeared, the origin and form of the same, etc., etc., were carried out by our State Department.

There are twenty-three ports open to foreign commerce in Cuba, FIVE as Quarantine Stations, containing everything necessary to handle any ship, besides two fully equipped Stations (Lazaretos), one in Havana and the other in Santiago de Cuba, with Hospitals sufficient for any contingency which might arise. Each port has a competent staff available for its needs. There are FIVE doctors attached to the Cuban Consulates in foreign ports with which we have close commercial ties or which send us great currents of emigration.

Vaccination is obligatory in Cuba. The Officers of the Quarantine Service vaccinate arrivals from foreign countries.

This Service costs the Cuban Government about ONE HUNDRED AND THIRTY THOUSAND DOLLARS a year. Fumigations, Bills of Health, etc., are entirely gratuitous.

There are no sanitary fees, and when any one is sent to the Quarantine Stations, his maintenance is supplied by the consignees of the ship, the State defraying all the rest of the expense.

IMMIGRATION.

The Immigration Department is a complementary branch of the Quarantine Service. This Department has charge of the physical examination of the immigrants, with the object of preventing the introduction into Cuba of persons whose immigration is prohibited, either because their habits might be the source of danger to the community, or because they may have some physical defect which sooner or later may oblige them to resort to begging or to apply to asylums for the poor, or, owing to their suffering from contagious or loathsome diseases, which are not necessarily quarantinable.

In Havana this important mission is entrusted to the Immigration Department, and in the rest of the Ports of the Island, the Collectors of Customs perform the duties of Commissioners of Immigration, in which the Doctors of the Port co-operate.

For the purposes of the Immigration Law, foreigners who come under any of the prohibitions or restrictions contained in said Law, may be divided into two great groups: to the one group correspond those whose habits or nationality bar them from immigrating; to the other belong idiots, insane persons, those suffering from loathsome or contagious diseases, such as Favus, Leprosy, Syphilis, Tracoma and Tuberculosis of the lungs. All immigrants who have physical deformities and who may therefore become a public charge shall be returned.

Immigrants free from all disease or physical deformity who arrive in Cuba in a state of pauperism, are lodged in the Triscornia Barracks, until proper work is found for them.

NATIONAL SANITARY DEPARTMENT.

To this Department is intrusted the preservation of the Public Health within the nation. Under its supervision are all the branches of Public Health Service such as Hospitals, Sanatoria, etc.

Each Municipal District has a local Sanitary Chief, with the necessary auxiliary Staff; the number of persons employed, and likewise the salaries of the officers, are fixed in proportion to the population of the district.

The superior direction of the Department is vested in a Board composed of six members, among whom are included a Lawyer and an Engineer as advisers. The Chief Sanitary Officer is the President of the Board.

This National Sanitary Board has general supervision over all matters concerning public health and sanitation in all the Republic.

It makes sanitary investigation of the causes of diseases, especially those of an epidemic character; including diseases of animals; the cause of malaria, and the effects produced on the public health by localities, conditions, habits, liquors and medicines.

It publishes the useful results obtained, and distributes popular instruction on these and other similar questions.

It compels the enforcement of the Sanitary Laws, including the laws regulating the admission to the practice of medicine and surgery, veterinary medicine, pharmacy, dental surgery, obstetrics, embalming, funeral agencies, prostitution, and also the laws regulating dangerous and noxious industries and occupations.

It compels the carrying out of all measures throughout the Republic, respecting the water supply, sewers, garbage and street sweepings, adulteration of foods, liquids and drinks, and also those concerning the importation and treatment of the cattle for slaughter.

It maintains in Havana a Biological, Chemical and Bacteriological Laboratory, fully equipped with apparatus and instruments, and with a competent staff to carry out bacteriological studies and to examine foods.

Besides these, there are Special Commissions, who are obliged to examine, so as to ratify or rectify, all suspected cases of contagious disease which might become epidemic.

Depending likewise directly on the National Sanitary Board are the dispensaries and official sanatoria, the Central Bureau of Vaccination and the Special Hygienic Service. (This last has in charge all matters referring to prostitution, and has branches in different cities of the Republic.)

Also depending on the National Sanitary Board, is the "Las Animas" Hospital, destined exclusively for patients suffering from contagious diseases; this establishment is specially equipped for this object.

And, lastly, the Maternity and Orphan Asylum, the Hospitals of Societies as well as private, are under the supervision of the National Sanitary Board.

YELLOW FEVER.

In the month of November, 1905, we were surprised by an outbreak of yellow fever in Havana, the more so, that from September 28, 1901, not a single autochthonous case had been registered, and, in order to avoid its introduction, all measures and suggestions taught by recent scientific discoveries, touching the transmission of the disease through the "Stegomya" mosquito had been stringently carried out. The spread of the epidemic, new cases arising before the necessary time had elapsed for the intrinsic and extrinsic incubation of the pathogenic agent proceeding from the original case, revealed the existence of an epidemic amongst us, very evidently proving that, either a group of infected "Stegomyas" had succeeded in entering this country, or that some infected person had formerly existed, notwithstanding our efforts to discover him, and in spite of the thorough investigation carried out. The problem remains unsolved; the introduction of yellow fever into Cuba can only be hypothetically explained; and, as is natural among all these different hypothesis advanced to explain the fact, we must accept the one having the most probabilities.

If we consider, that in the month of May, 1905, an epidemic of yellow fever broke out in New Orleans, of which we had no knowledge in Cuba until the latter part of the month of July, when defensive measures against that city were adopted, it is not unlikely to suppose, that during such lapse of time, some person being in the period of incubation and not being under observation, had

landed in Cuba; or that some ship from New Orleans had been allowed to move about freely, thus permitting infected "Stegomyas" to reach the city.

From the time the first case appeared in the year 1905, until November 7, 1907, 322 cases with 98 deaths have occurred in all the Island, and, if we consider the large non-immune population we have at present, it is easy to understand, that though it is true that the epidemic still exists, it has not reached the proportion that such epidemics usually acquire, owing to the tenacity with which it has been fought, notwithstanding the disturbed conditions of affairs.

The means employed to check the epidemic are those that would logically occur to any one in view of the manner of its propagation. To ratify or rectify the diagnosis of every person who may be suspected of suffering from yellow fever; isolation of the patient, and disinfection of all places where the disease is liable to have been taken, and likewise those places which in their turn he may have infected during the contagious period of the disease.

In infected localities, wherever it was possible to daily inspect non-immunes, this has been done, and whenever a non-immune has changed his residence, the different Sanitary Officers have been notified so that the person may continue under observation during the probable period of incubation.

Besides these precautions, all Quarantine as well as Public Health officers respectively, watch all routes by which an epidemic may be introduced, carrying out all the measures ordered, on the least suspicion, and immediately reporting to their superior officer, the President of the National Sanitary Board.

PLAGUE.

Notwithstanding the numerous vessels that daily arrive in Cuba from places infected by the Yersin bacillus, we have fortunately not had to lament the occurrence of a single case. Special care is taken to avoid the landing of rats from these vessels. Recognizing the importance that rats represent in the propagation of the plague, and their swimming powers being so great, the Quarantine Service experimentally tried to estimate this faculty; therefore, six large rats were thrown into the Bay of Havana, and their movements observed from a small boat. From this simple experiment the following was deduced: First. That rats are able to remain on the surface for a length of time varying from 35 to 45 minutes. Second. That they do not swim in a straight line, but forming irregular zig-zags, probably owing to the small horizon visible to them. Third. That if they happen to see any object, increasing their exertions, they steer for it, and if able to seize, they do not abandon it, unless obliged to by superior force. From these observations, the following practical results may be obtained: That it is sufficient to anchor the vessel, for fumigating purposes, at a distance of 50 meters, which rats do not cross, unless carried by the current or some floating object. That floats should be placed near the vessel so that rats on falling into the water may find refuge upon them and thus be easily despatched.

MALARIA.

In the Island of Cuba, as in all intertropical countries, malaria has been quite prevalent, and only through the constant sanitary work done, thereby avoiding as much as possible the propagation of the "Anopheles" mosquito, have we been able to diminish the number of cases. This work of Municipal sanitation was included in the "Sanitary Ordinances" which the Cuban delegates presented to the Second International Sanitary Convention.

Moreover, the systematic campaign waged against the "Stegomya" includes the "Anopheles" also, and this has been the cause of greatly diminishing Malaria.

The number of deaths owing to this disease has gradually decreased. In Havana in the year 1899, they reached 909, and last year 26 occurred. These numbers are the most evident proof of the success obtained in the sanitation of the city.

TUBERCULOSIS AND TRACHOMA.

The fact that a person suffers from either one of these two diseases is in itself sufficient cause to bar him from landing in Cuba, in conformity with the provisions contained in the Laws of Immigration.

In order to contend with these diseases in our territory, as well as against others equally contagious and transmissible, the National Sanitary Department

has adopted numerous and efficient restrictive measures, among which are, the prohibition to attend schools, colleges, workshops, factories, etc., to children, employees and workmen suffering from transmissible diseases or who come from houses where such a disease exists, or until they have obtained the proper discharge as cured.

A special Sanatorium for consumptives is at present being built as an experiment, in a suitable place in the Province of Havana.

There are negotiations pending for the purchase of a suitable property to which the "San Lazaro" Hospital will be removed after making the necessary repairs and improvements. This Hospital, where lepers are housed, mars the appearance and defaces the city, being besides very inconvenient for the purpose.

And, finally, in many cities of the Island plans are being made for the building of aqueducts and sewers, which will contribute greatly to the sanitation of the different towns and cities, the most important being those of Havana, Cienfuegos and Santiago de Cuba.

REPORT ON YELLOW FEVER.

Extract from the report made to the Provisional Governor of Cuba by Dr. Juan Guiteras, Chairman of the Committee on Infectious Diseases, and Dean of the Faculty of Medicine.

This report is based on a tour of inspection to the City of Cienfuegos, and to the central provinces of the Republic in the month of September of the current year.

On the day of my arrival in Cienfuegos, on the 19th of September, it was apparent that the breaking out of the epidemic was rapidly yielding to the efforts of the sanitary authorities charged with combatting the same. On leaving the city on the 22d of said month, there remained only five cases, three of which had originated in the neighboring towns of Guaos, Caunao and Soledad.

What happened at that time was in accord with our experience during the last few years, since the new outbreak of yellow fever in Cuba in 1905. It has happened ever since that the disease is under control in the centers of population where the sanitary organization can exercise prompt and efficient action, while in the country, on the contrary, the disease keeps dragging from one place to another, having an existence more or less unknown.

This prevalence of yellow fever at places in the country is a very interesting phenomenon, which now occupies our attention with all the interest of a problem of great practical importance. But we should not regard it as a new thing. In former times, before yellow fever was eliminated from the Island, the authorities did not pay much attention to the prevalance of the infection in the city of Havana, and paid much less attention to cases in country places. The disease could easily spread from one place to another without attracting the attention of any one, unless it should encounter some observing person like Dr. Pedro Albarrán, who had the good fortune and talent to photograph one of those peculiar rural epidemics among the native population.

Whether any records existed concerning the wanderings of this disease, we have reason to suppose that they were not lacking, since such is the history of all epidemic diseases. Smallpox, scarlet fever, and cholera, have migrated from the centers of population to the rural districts, and from the latter again to the centers of population in the form of a small secondary epidemic, thus maintaining the conditions called endemic.

This flux and reflux of the tide may be easily followed in the annexed drawing, which presents in synopsis the course of yellow fever since its introduction into Cuba in the fall of 1905. The cases which occurred in the cities of Havana and Cienfuegos are marked with black and red triangles, respectively, while those which originated out of the Capital are marked in red letters. There may be seen in said drawing how, during the administration of President Estrada Palma, the disease was extinguished in Habana in February, 1906; how the infection continued in the rural districts, and how Habana was again infected in June and August of the same year from said districts. The repetition of the same events during the present administration, may also be followed in said drawing.

The epidemic at Cienfuegos was also probably imported from the rural districts. At the end of the summer of 1906, the interruption of communication

with Habana, brought about by the political disturbances and insurrectional outbreaks, impeded or delayed the detection and control of a small epidemic outbreak in Cruces, though this outbreak was eventually controlled by Capt. H. D. Thomason, and Dr. Claudio Delegado. However, we may presume that the rural territory extending from Cruces and Cienfuegos, have served, by means of sporadic cases, as a slow fire concealed in the explosions.

We should, therefore, devote our attention more than we have done heretofore, to rural districts. Active and experienced inspectors in the diagnosis of yellow fever should be kept traveling through the provinces. They will, of course, be under the orders of the Department for the purpose of investigating and reporting concerning suspicious cases that may develop in any place. While they are not obeying direct orders from the Department, they shall travel on their own initiative and consult the local authorities and physicians, examine the statistics of mortality in the several municipalities, and shall endeavor to inform themselves concerning the sanitary conditions, and the direction of the currents of working men and immigrants.

In this second visit that I made to Cienfuegos, I was enabled to confirm the forecast which, together with Dr. Finlay, we had made during our previous visit in the middle of August, and I mention this fact merely because under the present circumstances it is proper to call especial attention to some points in the epidemiography of yellow fever.

Upon our arrival at Cienfuegos in August, we found a very violent outbreak of the disease in the American garrison, which contrasted with very slow evolution of the infection among the civil population. Among the troops a group of fifteen men (soldiers of the sanitary corps) within a very few days had caused seven infections, while among the civil population of the city only three had occurred. In spite of this threatening aspect of the outbreak in the garrison, we were able to foretell that the infection would be rapidly extinguished in that camp, and that it would cause a great deal of trouble in the city.

The fundamental difference between the two outbreaks was the following: In that which occurred in the soldiers' camp we had reason to believe that we had to deal with an initial outbreak among the soldiers. The first cases had been detected and properly treated; we knew precisely where the troops had become infected; we knew that the infecting mosquitoes must have been in a recently constructed wooden barrack which was built as an extension to the building which they had been using as a military hospital—a barrack which was occupied by the soldiers of the sanitary corps, in fact, we could almost tell the number of infected mosquitoes in the barrack. Therefore, it was to be presumed that a thorough fumigation of said barrack would terminate the outbreak of yellow fever in the garrison, and so it was, in fact, because said outbreak came to an end just as suddenly as it began.

On the contrary, in the city the situation was unknown. The three cases which had been denounced came from different wards of the city, and it was impossible to determine where the infection had been contracted. It was evident that other cases not detected had occurred before the denounced cases. Probably some of these had infected the mosquitoes of the aforesaid barracks, and at all events it was feared that a very active campaign would be necessary in order to extinguish the infection.

Such has been the campaign that is being carried out under the direction of Captain Thomason, with the co-operation of Dr. Claudio Delgado, in charge of the Department of Investigation and Diagnosis, and of Dr. Custodio, who has charge of the sanitation and disinfection works.

The methods employed by Dr. Thomason are the same as those employed by Dr. Gorgas in 1901, which constitute the practical application of the Finlay doctrine. It is proper here to state that the rules which said doctrine imposes are two, viz.:

1. The treatment of the infecting material, that is to say, the patient and the infected mosquitoes. This is accomplished by isolating the patient under wire gauze against insects and by the destruction (fumigation) of such mosquitoes as have bitten the patient.

2. A general campaign in order to prevent the breeding of the stegomyas for the purpose of obtaining, even though only temporarily, the extinction of that specie in the locality.

The discussion concerning the relative importance of these two rules seems useless. We must, of course, recognize as an incontrovertible truth, that either

of the two rules by itself would be sufficient to obtain the rapid extinction of any epidemic if our methods were perfect. However, it is proper for us to bear in mind what generally happens during a prophylactic campaign against yellow fever, and then it will be seen that, without doubt the purpose has always been to attend to two things at the same time; but in the acute period of the epidemic, when the clamor of the people is heard in all places expecting and demanding immediate results, the general practice has been to devote the greatest energy to the treatment of the material infected, leaving as a secondary consideration the work of the extinction of the breeding of stegomyas.

The material infected, the patient and the mosquitoes which have bitten him resemble somewhat the firing line of an advancing enemy against whom one hastens to direct his fire before going in a roundabout course and cutting off the communication of the enemy with his stores of ammunition.

When the Government of Intervention took charge of the direction of our affairs in the fall of 1906, when we were in the midst of an energetic campaign against yellow fever, it happened that Major Keane, Sanitary Supervisor, demonstrated that the inspection of the water reservoirs, the destruction of the larvae, and the general campaign against the stegomya had been neglected. It then became evidently advisable that Major Keane should have imparted the necessary activity to that section of the sanitation work.

The same happened during the recent epidemic at Cienfuegos, where the greatest possible attention has been given to the breeding places of mosquitoes, the strictest orders have been issued, which, however, there is no doubt that they had already been observing in some parts of the city; but some time was required before the people really understood what is required of them in the matter of deposits of water and breeding places of larvae. The doubts prevailing concerning the matter caused some delay in imposing of fines, which is the only way of securing the co-operation of all.

A general inspector arriving in the midst of the campaign may, by devoting his attention to this part of the program, efficiently support the efforts of the chief in charge of the work.

So far as the technique of the fumigation is concerned, Captain Thomason and his assistants realizing the necessity of modifying some details have tried new processes. There is no doubt whatever that by means of the system now employed, the mosquitoes are sometimes frightened away from the house during the preliminary preparation for the fumigation, either by the family taking down pictures, curtains, opening drawers and closets to take out anything that might be injured by sulphur, or by the fumigators themselves who shake in the air the strips of paper and the rolls used to cover the cracks and openings in the walls and ceilings. There is danger, especially as to the ceilings, in the mosquito remaining outside of the paper. In order to remedy this deficiency, Captain Thomason has attempted to close up the house from the outside, roof and everything else, with large canvas sheets. This method had been employed before in the disinfection of huts and barracks in Cuba as well as in Mexico, but continued experience is extending the application of the system to all kinds of dwellings and securing its use in practice.

Captain Thomason has also insisted on the advantage of concentrating the operations of a great number of workers in one single block of houses in order that all of them may be fumigated at the same time, and to prevent mosquitoes from flying from one house into another.

Something should be said in a report of this character concerning the general results obtained by the processes which are being employed in Cuba. It is of course quite natural for the mere lookers-on to become impatient, and to demand more rapid results, but the impartial opinion of experienced observers will recognize that the work which has been done in Cuba in order to combat yellow fever, both during the present administration and during that of President Estrada Palma has been highly satisfactory. During both epochs we have succeeded in preventing yellow fever from assuming, even remotely, the character of extensive annual epidemic recrudescenses, which characterized them in times gone by, nor has it been allowed to assume the serious epidemic forms which recently prevailed in New Laredo, New Orleans and Pensacola. The differences, owing mainly to the comparative promptness with which the plan of campaign is established in Cuba, because the announcement of the existence of yellow fever in any locality does not produce the public excitement that it

produces in other places where the fear of such panic causes the announcement of the disease to be delayed as much as possible.

If we compare the events of the present invasion of yellow fever which dates from the fall of 1905, with the results obtained in 1901 by the great organizer of the prophylactic system against yellow fever, Colonel Gorgas, we should take into consideration the difference of the existing circumstances in both epochs.

If we except the great difficulty involved in the creation of a new organism, we must admit that otherwise, the epidemic situation which Dr. Gorgas encountered at that time, was much easier to control than the present situation. He did not encounter the great obstacle we have pointed out in another part of this report, namely, the infection in the rural districts. The lack of initiative, the comparative stagnation of the currents of immigration had, at the end of the war, produced the cessation of the so-called endemic yellow fever in the interior. Under such circumstances, the effort wonderfully organized by Col. Gorgas in Havana was sufficient to give the death blow to the infection of yellow fever in the whole territory. His success was only interrupted for a moment by the re-infection from the neighboring city of Santiago de las Vegas, where it immediately found the well organized forces of Havana.

During the last two years, on the contrary, there has been a feverish excitement in the sugar industry. Since 1901 the recuperative strength of the country has been manifesting itself in a wonderful way. Great centers of cultivation have been created and many large groups of immigrants travel through the country or form villages in the neighborhood of the great central sugar plantations.

Another current of immigrants is directed to the network of roads now under construction, both day laborers and stone-cutters of said roads established their camps everywhere. This unexpected movement drags the disease to barn yards and public roads like the ebb and flow of the tide, and from the city to the rural districts, and from the latter again to the centers of population and open ports.

The present invasion of yellow fever heretofore presents a favorable aspect. Up to the present date the epidemic which we have been describing in this report has been a disease among laborers, or rather among immigrants, as it follows in the wake of workingmen and recently arrived employees. Now, then, this class of the population tends to congregate by forming groups which do not introduce themselves freely among the Cuban families, but rather put themselves in contact with the adult native laborers, black or white, the majority of whom are immune.

This prevents the infection from invading extensively the native infantile population, among which the prophylactic campaign and the diagnosis of the disease would be much more difficult than the newly arrived Spaniards who constitute a considerable portion of the laborers.

The new organization which has just been introduced in the sanitary department under which each sanitary local chief has, together with an abundant supply of means at his disposal, a well defined responsibility, will doubtless powerfully contribute to the final elimination of yellow fever in Cuban territory.

REPORT OF DR. JOSÉ HORACIO ESTEVES, DELEGATE FROM ECUADOR.

Although the sanitary condition in general, and especially that of Guayaquil the principal port of Ecuador, is still lacking in many respects, the progress of public hygiene among us has been comparatively considerable, due to the efforts of the Government, and the medical and charitable institutions during the last years.

The Sanitary Board of Guayaquil is an independent organization, with special powers and funds, constituted by the General Superintendent of Police, as its President, and seven physicians and a chemist, appointed from the most prominent ones of the city. It is represented in all ports, and its jurisdiction extends throughout five provinces of the coast.

The Board is provided with a Clayton apparatus of the largest type, with the necessary steam launch; for use in the city, they have another Clayton apparatus

of smaller type, for the disinfection of buildings and of what we improperly call the sewer system.

The Board is provided with two large formol generators of American make, twelve fumigators for solutions of sublimate and a large Autoclave for the disinfection of furniture.

The Board has also a provisional lazaretto, west of the city, and has adopted sanitary regulations and codes which are in conformity with the Convention of Washington.

Besides, the several charitable institutions established in Guayaquil co-operate with the Board and are in charge of the public and private hospitals, asylums, foundlng houses, insane asylums, lazaretto for consumptives, institution of animal vaccine, etc., etc.

The Board of Municipal Charities, which renders very valuable services, proposes to request of Congress in its next session the passage of an act making vaccination with animal vaccine compulsory.

The situation of Guayaquil and its suburbs, in lowlands which are subject to overflows, is the cause for the presence of malaria in this vast tropical region, not only during the rainy season lasting from December till April, but also during the dry season. In order to quench the disease, the most efficient measures are being carried out, draining swamp, and filling with petroleum and tar all places containing stanched waters.

I must also mention in this brief report the great projected work which will soon be carried out, that of the canalization of Guayaquil, for which an appropriation of 12,000,000 pesos (about $6,000,000) has been made. This is an indispensable improvement for the sanitation of that important port, and its realization will be the basis of all scientific works, the carrying out of which is at present impossible, for the definite eradication of yellow fever, and malaria, which is there endemic under all its forms.

Much has already been accomplished for the city with the realization of the water supply which is carried to the city by means of iron conduits, from a distance of many miles and through the Gulf of Guayaquil. Thanks to this improvement, carried out by the Municipality, the sanitary conditions of Guayaquil are now more favorable; but much remains yet to be done in order to give to that important port on the Pacific the habitable conditions required in a perfect city.

Guayaquil is a beautiful city located on the right bank of the River Guayas, and has now a population of 90,000 inhabitants, in spite of the fact that it has been ravaged by fires on different occasions. In the center of several provinces, it is very important on account of its commerce, and still more on account of its agricultural wealth, its production of cacao being equal to two-thirds of the total world's output.

One of the great works which will soon be finished, and of which I wish to make special mention, is that of the Rocafuerte Sanatorium in Quito, the capital of the Republic, which comprises several magnificent buildings, distributed according to the most recommended hygienic rules, and which will be devoted to the exclusive attendance of consumptives. The climate of Quito is most beneficial to the treatment of the disease, the temperature being 12° centigrade, and the altitude 2,850 meters above the level of the sea. When this sanatorium is completed it will be one of the best establishments of its kind in the world, if it will not excel them.

Water and sewer works are also being carried out in the capital of the Republic, and in the provinces of the Chimborazo and Oro.

Malaria has its principal foci in the province of Esmeraldas, in the central and northern parts of Manabi, in the greater part of the Province of Manabi, and in the provinces of Los Rios and El Oro; of the interior provinces, only those of Chimborazo are free from malaria. To eradicate this disease in the rural towns of the mountain regions would be an almost impossible task, but the National Government, the municipalities, and the scientific and charitable institutions are working together for the purpose of improving in the best possible way the sanitation of the principal centers of population, and to destroy the mosquitoes that transmit the disease.

Trachoma, beriberi, and bubonic plague are totally unknown in Ecuador; the latter disease invaded the border province of Piura, Peru, but it did not pass into our country, due to persevering efforts of Board of Health, which established maritime and land quarantines. To this end, there established in 1903, in the

Island of Puna, a sanitary station, fully equipped, and under the immediate charge of a physician.

Smallpox appears occasionally in a benign form, never assuming the proportions of true epidemic, and only among those who have not been vaccinated.

To contribute to the improvement of hygiene in our country, the delegation from Ecuador will convey thereto the practical lessons which necessarily will be derived from this Sanitary Convention.

REPORT OF DRS. SALVADOR ORTEGA AND JUAN AZURDIA, DELEGATES FROM GUATEMALA.

The Guatemalan Republic, by invitation of the International Sanitary Office of Washington, courteously given by the Government of the United States of Mexico, comes to the Third Sanitary Pan-American Convention through the undersigned delegates who have the honor of representing their own country.

The Republic of Guatemala has entered into that sanitary movement, imposed by the necessities of mercantile intercourse and demanded by the advances which public and private hygiene win from day to day.

For this purpose it promulgated in May of 1906 its Code of Health, based upon everything new, that the legislators could find applicable to the conditions of the people who constitute that country.

It also subscribed to the Convention of Washington, an adhesion warmly recommended to the countries which have not subscribed to it, by the 2d Pan-American International Conference.

In that Code and in that Convention figure all the practical recommendations which must be developed in the Republic, for national and international security in sanitary affairs, whether in the domain of prevention or in that of combating the pest, cholera, or yellow fever.

Our scarce relations with the countries scourged by the bubonic fever have sheltered us against its invasion. The pest of the Orient has never penetrated among us.

The Asiatic Cholera Morbus was imported into the national territory in 1857. It has never appeared again in the country.

The last epidemic of black vomit presented itself in the Department of Zacapa, in the eastern part of the Republic, in August and September of 1905.

It entered by the northern coast, on the Atlantic shore, imported from Belize to Honduras and from Honduras to Livingston, whence it penetrated into Zacapa and scourged that town, the seat of government of the Department of the same name.

In the year 1900 we had an epidemic of small-pox, which propagated itself through all the Republic, producing numerous victims, and since that time it has not again appeared.

The exanthematic typhus has penetrated through the frontiers which bound us with the Mexican Republic, invading the Departments: San Marcos, Quezaltenango, Suchitepequez, Totonicapam, Sololá, Quiche, Chimaltenango, Sacatepequez and Guatemala, in a slow, gradual invasion which lasted from 1897 until the beginning of the present year, having almost completely disappeared; since the statistics of the capital during the last six months give but one case in the Hospital for Epidemics.

Malaria, in all their kinds, is observed in the coasts of both seas. It disappears in dry season, and reappears again at the beginning and conclusion of raining season.

In order to avoid it, is made in Puerto Barrios in the Atlantic coast, the systematic petrolization of swamp waters; and in San José, a port on Pacific Ocean, is made too, in little scale, the necessary drainage.

These two ports, which are the most important populations on both seas, will be opportunely fixed, according with the projects that the Government has in study for it.

Our medical statistics and the data which we have acquired from the physicians of the Republic, have not demonstrated to us the existence of trachoma in our territory. As much can be said of beri-beri.

To prevent the invasion of infectious, contagious and epidemic diseases, there have been decreed from 1905, the following legal dispositions:

Code of Health and the laws and regulations from it deduced.

Law of Sanitary Police.

Law as to obligatory declaration of infecto-contagious diseases, and the disinfection of places and objects contaminated.

Regulations of dairies.

Regulation of slaughter houses and slaughterers.

Regulations of bakeries.

Regulation of butchershops.

There has been created in the capital, the National Disinfectory, which has:

A Chief.

A Secretary.

An Inspector.

A corps of disinfectors and the following apparatus and fixtures:

One medium, fixed Geneste Herscher oven.

Four pulverizers for solutions of bi-chloride, of German model.

Four pulverizers for formaline.

Two pulverizers for bi-chloride solution, French model.

Two apparatus for whitewashing.

And the accessories for home disinfection, such as wagon for infected and disinfected objects, etc., etc.

There has been also created the institute for animal vaccine in the capital of the Republic with the following dependences:

Room for the examination of animals.

Room for the preparation of the same.

Room for operations.

Stable for those inoculated and not inoculated.

Room for autopsies.

Sleeping room for the warden.

Microbiological laboratory.

Packing and distribution department.

Archive.

It is provided with the necessary instruments and with the following personnel:

One Director.

Two practitioners.

One Chief of Laboratory.

One servant man.

One Warden.

This Institute was founded in 1902 as an adjunct to the Military Hospital, but has now a building of its own of modern style, abounding in gardens and situated on one of the principal avenues of the capital.

Vaccination is obligatory for every person, according to a law promulgated in the year 1883. Never is made from arm to arm.

There has also been established a "Hospital for Epidemics," that is, an establishment for isolation, beyond the limits of the City of Guatemala, for all sick people attacked by infecto-contagious diseases and another at the city of Quezaltenango.

For study of, vigilance over, and development of all affairs relating to public health, there was created the Superior Board of Health.

It has already dictated measures pertaining to the purpose of its institution, and is working to resolve all the problems which relate to the practice of the stipulations of the Convention of Washington.

The Supreme Government, to fulfill the stipulations referred to, has under study the projects upon:

The creation of the Sanitary Station of Puerto Barrios, and that of the Puerto of San José.

It has also in project the creation in the capital of a crematory for sweeping and rubbish, and a complete slaughtering house.

REPORT OF DR. LUIS LAZO ARRIAGA, DELEGATE OF HONDURAS.

Having been appointed by the Government of Honduras as a delegate to this Congress, I request your kind attention for a few moments.

The late politico-economic conditions of Honduras have prevented her from carrying on the sanitation works begun on the Atlantic coast. The Government I represent is convinced that the disease which causes the greatest ravages in the country is malaria, and hence its principal efforts are directed to the drying of the swamps on our coast.

I hope that before long the results obtained may be communicated to this Congress.

The picturesque port of Amapala, situated on Isla del Tigre (Tiger Island), on the Gulf of Fonseca, used to be frequently ravaged by yellow fever; but as the only stagnant waters on the island are those contained in a small pond formed from rainwater, it was easy for the health authorities of the aforesaid port to cover said water with a thin coating of common oil, or petroleum, during the dry season, and by this means black vomit, or yellow fever, disappeared many years ago from our Pacific port.

The same is not true of the Atlantic ports; but the strict quarantine measures adopted in co-operation with the sanitary authorities of New Orleans last year, prevented the introduction of these diseases on our coasts.

As an epidemic smallpox has disappeared almost entirely from the country, thanks to compulsory vaccination, and whenever cases occur they are immediately isolated, and preventive vaccination is resorted to.

Tuberculosis is a disease that weighs but little in the sanitary balance of the people of Honduras, so much so that the death rate caused by this disease does not exceed one per thousand.

The small density of population, the great abundance of pine trees in our fields, the profusion of solar light and pure air, are no doubt the reasons why Honduras is unfavorable to the spread of tuberculosis.

Cholera, the bubonic plague, trachoma, and beri-beri are entirely unknown in Honduras.

REPORT OF THE DELEGATION FROM MEXICO.

YELLOW FEVER.

We have the pleasure of declaring to this Convention that in no part of the National Territory is there any epidemic of yellow fever; that in the course of the present year only five cases have been reported, in a small village called Paraje Nuevo, in the Canton of Cordoba and State of Veracruz. Of these two cases one was taken to Veracruz on suspicion and there confirmed on the 7th of February of this year. He was properly isolated, but succumbed on the 9th of that month. Two cases were reported in Merida on the 19th and 21st of March, and another case, which was very doubtful, was reported in Veracruz on the 5th of September last, which two local physicians diagnosed as yellow fever, whilst two others of the same locality were not of the same opinion.

As can be seen, these cases were of a sporadic character and in no part of the Republic has there been anything like an epidemic.

This result is highly satisfactory and is a further proof that the methods adopted in Mexico will obtain the final disappearance of that fearful disease from our territory. It is very true that we have adopted methods which differ from those generally followed in other tropical countries, by continuing our campaigning even during the winter, and by not making any modifications at any time whatever in the services which are carried on in those places that have for centuries been the foci of endemia: Veracruz and Merida.

In the former city, the service is carried on by dividing it into four different districts, each under the charge and supervision of a physician with 27 agents and 19 servants under his orders, as well as an engineer who is specially employed in the drainage of all swamps which may be formed, in the filling up of the hollows in which pools of water may accumulate, and if this cannot be done, in spreading a thin layer of oil over the water. This engineer also looks after the connections between the house drains and the sewerage system of the

city. The rest of the staff is occupied in forming the schedule of the non-immunes who may be found in each district so that they may be visited every day and discovered at the moment when any one of them falls sick, in order that such patient may at once be carried to an isolated ward. At the same time that the staff makes its visit to every house it inspects the water system (cisterns or tanks) and if they are found to contain larvae they are emptied, the larvae destroyed, the water renewed, and the owners are made to cover the deposit with a proper cover or a layer of oil is spread on the surface.

Whilst all these services are carried on, measures have been taken to improve the sanitary conditions of the city; suitable works have been executed for the supply of drinking water, with a network of sewers to carry the refuse out to sea, and other works are in course of construction to carry off the surface water and to lay first class pavement throughout the city. When these last two works are completed the sanitary condition of the port will be notably improved.

In Merida, the city is also divided into four districts, each under the charge of a physician, under whom are 28 agents and 38 servants, who carry on a similar service to that above described with respect to Veracruz. The city of Merida is distinguished for its cleanliness, the streets are paved with sheet asphalt; the houses are all very clean, and even in the poorest of the laboring class, they have carried their personal cleanliness to a height which is hardly ever found in any other city.

In Progreso the service is carried on by a physician and two agents, whose labors are dedicated to the same purpose as above indicated.

In order to attend to any sporadic case of yellow fever which may be observed in any of the towns that in former times have been invaded by this disease, three Flying Brigades have been organized.

One of these has its headquarters in Cordoba where the Mexican Railroad (from Mexico to Vera Cruz) connects with the Vera Cruz and Pacific R. R. and its sphere of action extends to Santa Lucrecia on the one side to Vera Cruz on the other, and on the South as far as the Valle Nacional, as shown by the territory indicated with a red line on the plans herewith presented.

The second brigade has its headquarters in Coatzacoalcos, and its radius of action extends to Sta. Lucrecia, thus including the two counties of Vera Cruz which are indicated by a blue line on the map.

The third brigade has its headquarters in Salina Cruz and operates as far as Sta. Lucrecia where the Vera Cruz and Pacific R. R. connects with the Tehuantepec National, thus covering a territory which is indicated by a green line.

The methods by which these brigades work is as follows: The Supreme Board of Health daily receives a report on the sanitary conditions of the different towns with the following data:

New cases observed on the date of the report.
Total number of cases from the first day of the year.
Number of cases discharged on the date of the report.
Deaths on the date of the report.
Total number of deaths from the first of the year.
New foci of infection on the date of the report.
Total number of foci discovered from the first of the year.
Cases confirmed and subjected to treatment.
Suspected cases isolated on the date of the report.
Domiciliary visits made to dwellings of immunes.
Dwellings of non-immunes visited to ascertain whether anyone is suffering from fever.
Reports of train inspectors.
Water tanks or cisterns emptied.
Water tanks or cisterns covered with oil.
Wells covered with oil.

As the above reports are sent daily by telegraph the Board at once knows where a suspected case of sickness has been found and the Chief of the respective Flying Brigade is ordered to proceed there with a part of his staff, and the necessary utensils to disinfect the premises as well as a sufficient quantity of oil to cover the water tanks. The suspected patient is isolated, the house in which he has lived is disinfected, as well as the neighboring houses and a domiciliary visit is made so as to discover whether anybody else is sick.

As cases have been found and may again be found of persons who are suffering or suspected of suffering from yellow fever, traveling on the railroad trains,

a sanitary agent travels in every train and takes notes of all the passengers, taking their names and place of destination. If any person is found sick but able to continue his journey seated, he is covered with a hat and veil of the form presented herewith. If he cannot continue seated, he is covered with another veil, of the form presented herewith, and when he reaches his destination, he is turned over to the chief sanitary officer of the locality in order that he may be isolated. This service is carried on in all the trains running through the zones that, in previous periods, have been invaded by yellow fever.

If focus of yellow fever should be discovered in any place within the districts shown on the map, the Flying Brigade at once proceeds there, and if there is any lazaretto or hospital, the patient is isolated therein, whilst if there is none, a provisional portable hospital is erected in accordance with the model now presented.

As the States in which yellow fever has appeared, not only contribute out of their own resources to the maintenance of the service above described, but have also transferred their authority and powers to the Federal Government, there is only one central authority in the City of Mexico, and it is this which, by means of the telegraph, controls the service of these Brigades, and thus can take timely action in any emergency which may arise.

We believe that if all the nations of the Western Hemisphere within whose territory yellow fever prevails, would establish a service similar to that which has been so successful in the Mexican Republic, we could feel certain that within the near future this disease would disappear from the face of the earth.

As it is the duty of the Mexican Delegation to indicate the transmissible diseases which prevail in this Republic, and it has no exact figures available which would show the frequency of malaria, on account of the difficulties which attend the collection of these data, the present report is limited to a map which shows the geographical distribution and comparative frequency of the disease in the different States of the Republic. It is difficult to obtain these data because in cases of chronic malaria, the patients are not confined to their beds, nor do they give any notice of the existence of the disease. Nor can any consideration be given to the mortality returns, because this disease does not directly result in death, except in cases of pernicious fever, and malarial anemia, which predispose the patient to contract other fatal disease, it does not figure amongst the causes of death.

As regards malaria, we already know the germ which produces it, the agent which transmits it and the method of curing it, but nevertheless, we find it scattered through such extensive territories and amongst so many different peoples, that we can only wonder that it has not been as yet extinguished.

The fact is that the scientific problem is very simple, but the practice is very complicated. In fact, the spread of the disease requires three factors, as follows:

A patient suffering from malaria.

An anopheles mosquito to sting him, and

A predisposed person to receive the inoculation from that mosquito.

Theoretically the problem is resolved by disassociating the two first factors, or by conferring immunity on healthy persons.

In fact, if we isolate the patient in rooms whose doors and windows are covered with wire netting, the mosquito can not get in to sting him.

If we could destroy all the mosquitoes of the genus "anopheles," there would be no agent to transmit the disease from the sick to the healthy man.

And lastly, if we could confer immunity on healthy persons, the propagation of malaria would be impossible.

But these resources, which are so simple in expression, find great difficulties in their application, which we will try to set forth in order to study the methods for overcoming them.

In diseases which assume an acute form, the patient, finding himself obliged to take to his bed, gives himself up, so to speak, to the sanitary authorities; and this is what takes place in cases of bubonic plague, cholera, yellow fever, scarletina, measles, typhus, etc. But those who suffer from malaria, unless in the pernicious or ordinary acute form, are not confined to their beds; they go in and out of their houses, attend to their ordinary occupations, do not consult a physician, and therefore do not come under the supervision of the sanitary authorities until the disease assumes an acute form, but as these patients who suffer from the chronic form are liable to be stung by mosquitoes which are thereby infected, they are as much a source of danger as those who

suffer from the acute form, whilst on the other hand, as they are so numerous in marshy countries, it is almost impossible to submit them to isolation, which if possible would be a measure of unquestionable efficiency, as it is with regard to yellow fever.

The second resource would be the extinction of the mosquitoes of the genus "anopheles." This work has been undertaken with great success in some parts, as for instance in Ismailia, where it was tried for the first time, and by ourselves on the "Eldorado," State of Sinaloa, as well as in all other places where we had special services for the suppression of yellow fever. This method consists in the extermination of the larvae of the mosquitoes, wherever they are discovered in water tanks or pools where the females deposit their eggs.

But if it is a question of such large areas as those in our territory which are occupied by immense swamps in which the mosquitoes breed in fabulous numbers, the resources which are available and practical in the cities become impracticable in such an enormous scale.

There are still other resources, of which the principal consists in the drainage of marshy lands or the spreading of oil over the waters. The first of these methods has been carried out in England with success for many years back. The marshes are made to disappear either by drainage or by filling up; but this method, although really efficacious is slow and very expensive when the marshes cover a large area.

As regards smaller areas of water, we have the resource which is always very effective, of covering them with a thin layer of petroleum. This method is that which we are now employing in Merida, Progreso, Coatzacoalcos, Vera Cruz and Tampico along the Gulf Coast, and in Salina Cruz on the Pacific Coast. For the last four years our Government has appropriated large sums to the campaign against yellow fever and malaria, and these funds are employed over all the zone of the State of Vera Cruz which is included between Córdoba and Santa Lucrecia, and on the Isthmus of Tehuantepec.

When we have been able to extinguish yellow fever, the numerous staff that we now have employed in that campaign will go from district to district, executing the same efficient work which has been carried out in the places above named during the last four years.

The other resources which we have at our disposal through our knowledge of the germ of the disease and its methods of transmission, is that of procuring the immunity of the persons who may have to expose themselves to the sting of infected mosquitoes. The means which are at present available consist in the administration of the salts of quinine, which is both preventive and curative. The experience acquired in Italy, in those parts of Africa where these salts have been employed, and in our own country, have demonstrated the efficiency of this method, and we propose to employ it on a larger scale under the supervision of the brigades which are now almost exclusively employed in the struggle against yellow fever. But in order to make the struggle against malarial fevers really effective and to convert it into a universal resource, it is necessary for us to preach by means of books, of the scientific and general press, and of lectures, the doctrine of the transmission of malaria and the powerful resources which are available against it, and not leave this task to the exclusive attention of the authorities.

I, therefore, propose to this Honorable Convention that we should commence a crusade against malaria similar to that which we have already undertaken against tuberculosis. If we can convince every man of the dangers offered by swampy countries, and that it is within his power to take precautions against the sting of the mosquito; if we inculcate in him the prudence of sleeping under a mosquito net, of having the doors and windows in his dwelling provided with screens that will prevent the entrance of the mosquito; if we can teach him to cover the pools of water which cannot be drained or levelled up, with oil; if we accustom him to use small quantities of quinine which will afford him protection when he cannot have that of the gauze curtains or screened doors and windows, we will convert each man into a co-operator in this great task.

I come to propose the adoption of these methods after having seen the practical and good results that they have given in our campaign against yellow fever, and also in view of the experience that we have acquired, even though on a small scale, in the "Eldorado," property in the State of Sinaloa.

The facilities of communication between men, whether by land or by sea,

have resulted in the greatest benefit to humanity; but as there is no benefit which is not accompanied by its corresponding evil, the same can be said with respect to the facilities which are afforded by steamship and railroad transportation.

In moving from one place to another, men carry with them the diseases from which they may be suffering. The international Sanitary Police has displayed the greatest care, sometimes to a very exaggerated degree, in its endeavors to prevent transmissible acute diseases from being brought into the ports or frontier cities, or in more exact terms, it has endeavored to put every obstacle in the way of the transmission of those diseases, by detaining those persons who are sick or suspected of suffering from those diseases, in the ships by which they have been transported or in special lazarettes. But as regards transmissible chronic diseases, no notice has been taken of them by the legislators before the present time, and nevertheless it is as necessary to protect ourselves from the acute transmissible diseases as from those which have a slow development and are therefore denominated chronic.

In these days, when the Asiatic immigration encounters such great difficulties in its efforts to penetrate the United States of America, its current has been turned towards the countries of Latin America. In Mexico we receive every month one or two steamers in the port of Salina Cruz, some with Chinese and others with Japanese immigrants.

Our Sanitary Code provides that only those persons will be allowed to enter the Republic with the character of immigrants, when they are in possession of certificates which prove their perfectly healthy conditions, issued by the competent authority in the place of departure and viséed by the Mexican Consul. Under Art. 49 of that same Code, certificates which have been issued two months previously to the date on which the immigrant reaches our shores will be considered null and void.

This measure was found insufficient in practice because the immigrants might have started from their own countries with the diseases in a state of incubation and reach our ports with them already developed. It is to be noted that our situation lends itself greatly to the transmission of disease, because the ships do not touch at any port on their voyage, but come directly from the Asiatic ports to ours on the Pacific. In view of this, orders have been given with respect to Chinese immigrants, which may be briefly summed up as follows:

The immigrants must come provided with certificates of health issued by a physician in the port of departure and viséed by the Mexican Consul in that port, or in his defect, by the United States Consul.

Asiatic immigrants can only be allowed to land in the port of Salina Cruz, if they are more than ten in number; but when their number does not exceed ten, they are allowed to land in the ports of Acapulco, Mazatlan, Guaymas, Tampico, Vera Cruz or Coatzacoalcos.

Every ship which transports immigrants is received in accordance with the provisions of the Sanitary Code, the Maritime Sanitary Regulations, and the Special Ruling which may be issued by the Supreme Board of Health in each case and in view of the circumstances.

If there are none of these special circumstances present, the healthy immigrants are at once allowed to land and are directly taken, over a special wharf, to the lazarette which is dedicated to them.

In this lazarette they are made to bathe, their clothing and baggage are disinfected, and they are kept under observation for a period of *ten days.*

If at the end of that period no disease has made its appearance amongst them, they are permitted to leave, but also required to report to the delegate of the Supreme Board of Health, the point to which each immigrant proposes to travel.

Up to the present these measures have been sufficient to keep us free from cholera, bubonic plague and yellow fever; but they have not prevented the introduction into the country, which has actually taken place, of persons suffering from beri beri. As this disease was entirely unknown in Mexico, and on the other hand, the persons who are suffering from it in its first stages when it was not as easy to recognize the symptoms which render it so visible in a more advanced stage, several cases presented themselves in Salina Cruz, Tehuantepec and Sta. Lucrecia, which were confined to the immigrants themselves. As soon as the sanitary authorities discovered these cases, they immediately required that the patients should be reshipped to their own country and gave orders that no person suffering from beri beri should be allowed to land.

Trachoma was a disease that in Mexico was only known to oculists, and it must have been so rare that a knowledge of it had not reached the generality of the medical public, and still less, the laity. A distinguished opthalmologist of Mexico, Dr. Lorenzo Chavez, had occasion to observe last year a small epidemic of trachoma in one of the Government schools, and called attention to the danger of its propagation. This fact led the Sanitary Authorities to fix their attention on the possibility of trachoma being introduced by the Asiatic immigrants, and on the danger of that disease spreading through the country. The Sanitary Delegates in the ports having been warned, they commenced to note the number of persons suffering from trachoma who reached the Republic, and naturally it was found that those arriving in the Pacific ports were more numerous than those who arrived by the Gulf ports. In one steamer, the number of persons suffering from trachoma was found to be 220.

The Supreme Board of Health then asked the Department of the Interior to prohibit the landing of such immigrants and they were therefore returned to China, and a ministerial declaration was obtained to the effect that immigrants suffering from this disease would not be allowed to land in any of the Gulf or Pacific ports of this Republic.

In order to prevent the introduction of any of the above diseases, a careful inspection is made of the immigrants before they embark in the port of Hong Kong, which is that from which the Chinese immigration generally proceeds.

For this purpose a physician has been sent to that port with the character of delegate of the Supreme Board of Health, and commissioned to prevent the embarkation of all emigrants who may be suffering from bubonic plague, cholera and other acute transmissible diseases.

We are now studying a law which will prevent the landing in our ports of persons suffering from tuberculosis, scrofula, malaria (acute for the moment), beri beri, trachoma, and other transmissible chronic diseases. It is likewise proposed to prohibit the landing of the insane, aged, idiotic children, those whose constitution is much debilitated by any previous disease or by organic weakness; the lame, one armed, humpbacks or deformed who may be unable to work; and of all those who may become a public charge.

We have hopes that if the Legislature will enact a law, which we now have under study, we will not only keep ourselves free from the diseases which hitherto have been unknown to us, but also protect our neighbors from those diseases by not admitting them into our territory.

I invite the Honorable Delegates to this Congress to suggest similar measures to those we have already adopted, to their respective Governments, or such as will soon form part of our Sanitary Legislation.

If all the nations of America would form a close alliance in order to prevent extent of our continent, we would contribute in a very efficacious manner to the introduction of the sick or incapacitated for work throughout the vast the improvement of the hygienic and social conditions of our respective nations.

THE BUBONIC PLAGUE.

In order to comply with the Programme of this Convention, I desire to say a few words with respect to the bubonic plague, not because we have this disease amongst us at present, but because we had it in December 1902 to May 1903, and because we are threatened by the present epidemic which prevails in San Francisco, California. As we were able to completely and finally stamp out that epidemic, the experience which we acquired has taught us the measures which are capable of giving that result, and which we now desire to lay before this Honorable Convention.

I hope that a relation of these measures will eventually serve to govern sanitary authorities in any similar case, seeing that they were sanctioned by actual experience.

As the most certain means of preventing the propagation of an epidemic is to diminish the number of persons who might be exposed to contract the disease, it becomes necessary to oblige the greatest possible number of inhabitants to leave the invaded town.

This exodus can only be ordered in small towns; but in larger cities fear drives out all pusillanimous people who have sufficient resources to leave.

This measure is of great efficacy but always on the condition that the persons leaving do not carry with them the germ of the disease.

In order to avoid this danger a medical commission is appointed to examine the persons who propose to leave the town, and to prevent the departure of those who are actually sick or suspected of being so. Certificates are issued to healthy persons which serve them as passports, and a register is kept in which are entered their names, sex, age, civil status and destination, all of which data are forwarded in a note to the authorities of the place to which the emigrant goes, in order that he may be kept under observation for ten days from that on which he started from the infested town.

It is therefore necessary to procure the departure from the infested town of the greatest possible number of healthy people. Another measure of inquestionable efficacy is found in vaccination. This was very successful in Mazatlan, but still more so in a small village called Villa Union, situated 34 kilometres from that port. The families who abandoned Mazatlan before the inspection service was established must have carried the plague with them to Villa Union, with the result that thirty-four people were taken sick of whom nine died. But from the moment that the first cases appeared a similar service was organized to that of Mazatlan, which is referred to further on, and especially, steps were taken to commence the application of the Besredka vaccine, which was administered to 3,575 persons who were liable to take the disease, and the epidemic was entirely extinguished.

It is therefore necessary to vaccinate the whole or at least the greater part of the residents of the infested town.

The isolation of the sick is a method that has been most frequently adopted; but this encounters the same difficulty everywhere, which consists of the finding of the persons attacked, who are hidden by their relatives for fear that they will be carried to the lazarette.

Experience shows that the obligatory declaration by the physicians is not sufficiently timely, because they are over-persuaded by the families or require to wait until they can make a diagnosis, and for one or another reason they do not give timely notice and neither do the managers of factories or workshops comply with that provision, for fear of losing their hands.

In one word, in spite of the penalties imposed by the Sanitary Code, the obligatory declaration is neither complete nor timely, and in practice it has been found necessary to adopt other means, which are found in the *domiciliary visit.* In Mazatlan this was carried on by the organization of Sanitary Brigades which were composed of very able agents who made house to house visits so as to take the dwellers by surprise, and if they found any person in bed or who appeared sick, they took his temperature, examined his neck, his armpits and groins, and so discovered those who had taken the disease.

It is therefore necessary, for the purpose of discovering the sick or suspected persons, to make a house to house visit.

Once a suspicious case was discovered, it was isolated in a special hospital, to be submitted to a careful and constant observation, and as soon as the disease was confirmed, the patient was removed to the lazarette.

It is therefore necessary to have a hospital for suspected cases.

In order to perfect the isolation of confirmed cases, a lazarette was utilized on the Belvedere Island in the port of Mazatlan. In this lazarette a ward was dedicated to the sick and another to the convalescents, this proceeding being founded on the experience of Kitasato, that the patients continue to be dangerous during the four weeks following their entry into the convalescent stage.

It is therefore necessary to establish a lazarette for the confirmed cases, as well as for the convalescents.

As those persons who surround the isolated patient might have the disease in a state of incubation, it became necessary to watch them, and for that purpose an observation camp was established on the slopes of the Velodromo hill. As soon as a sick man was removed from his house, all the other persons dwelling in it were taken to the temporary sheds that had been erected under the best possible conditions, and where they were fed and their clothing was changed for new and clean. The clothing with which they reached this camp was promptly burnt.

From the above remarks it will be seen that in order to render the isolation efficient, it is indispensably necessary to establish the following institutions:

A hospital for suspected cases; a lazarette for the confirmed cases; a department in the latter for the convalescents, and an observation camp for those who have surrounded the sick person.

Once the house in which the patient was discovered was disoccupied, it was disinfected and measures were taken for the destruction of the rats and mice.

The disinfection was carried out by means of a solution of bichloride of mercury at 2 per 1000, which was sprayed by means of the Japy apparatus, or of pumps. The floors, walls and roofs were washed; the clothing of any value was removed to the disinfection stoves, which were supplied by the French firms of Geneste Herscher and Dehaitre. The clothing of little value was incinerated.

As Mazatlan contained many huts which could not be disinfected by reason of the materials of which they were built, or of the many cracks and openings in the walls, they were burnt. In this manner there were 1060 houses destroyed in Mazatlan, 64 in the village of Villa Union and 57 in that of Siqueros. This method had the advantage of destroying at the same time the rats and mice.

According to the above it is necessary to destroy by fire those houses which cannot be properly disinfected.

The rats and mice were purchased at fifteen cents per animal and the authorities were thus enabled to kill 6,982.

The Danzy virus was taken advantage of to produce in those rodents an epizootic which does not attack man. We have no means of estimating the number of animals which were killed by this method.

In order to destroy the fleas, the floors of the dwellings were sprayed with a solution of bichloride of mercury.

It is therefore urgently necessary to destroy the rats, the mice and the fleas.

For the purpose of preventing the propagation of any epidemic, the following measures were taken:

The whole of the inhabitants of Mazatlan were reminded of their obligation to report the existence of any sick person in the houses, schools, colleges, factories, workshops, barracks, etc.

The schools were ordered to be closed and no large number of persons were allowed in the churches, whilst the great religious ceremonies of Holy Week were ordered suspended.

Orders were given for the vaccination of the people, at first with the Yersin serum, and afterwards with the Haffkine and Besredka serums.

Orders were given for the more frequent watering and sweeping of the streets, and for the daily destruction of the garbage and sweepings by fire.

A laboratory was organized for the purpose of examining the rats and mice.

Steps were taken for disinfecting the markets, cowsheds and barracks. Wherever the hollows in the streets permitted standing water, they were levelled up, and a ditch which ran across the town and contained foul water, was closed.

The measures adopted to prevent the disease from spreading beyond Mazatlan by land were the following:

All persons emigrating were examined as above stated; the clothing which they carried along with them was disinfected; their baggage was inspected, and a memorandum of the persons leaving was forwarded to the authorities in their place of destination.

On the most frequented high roads leading out of Mazatlan, and at a certain distance from that city, a first line of sanitary stations was established which were intended to make an inspection of all persons emigrating.

At a greater distance there was a second line of sanitary stations, and lastly in all those States of the Republic which adjoined that of Sinaloa—in which Mazatlan is situated—the respective Governments also established their own sanitary stations.

Each one of these consisted of a department in which persons suspected of bubonic plague could be lodged; of another dedicated to the confirmed cases and of still another for the convalescents. There was also a disinfecting stove of one of the models above mentioned, a room dedicated to the disinfection of merchandise by means of sulphurous acid, a bathing department, and living rooms for the staff, all making a complete sanitary station.

I must inform you that there were only wagon roads leading out of Mazatlan, and therefore the sanitary stations were arranged in such a manner that the passengers who left on horseback or by coach, would reach the first station at the end of the first day's journey, so that if any passenger was sick or suspected of sickness, he could be detained there.

The second day's journey brought the travellers to the second sanitary station, and if anyone fell sick on the third day of the journey, he would find the sanitary stations which had been established by the States adjoining that of Sinaloa.

In order to prevent the travellers who fled from Mazatlan avoiding the neighborhood of the sanitary stations by not following the regular roads, but rather the by-paths, a flying brigade was organized under the orders of a physician, and which kept a watch over those little traveled ways in order to collect any sick persons who were found and take them to the regular stations.

From the above it will be seen that it is desirable to establish sanitary stations around the infested city.

In order to prevent the transmission of a disease by sea, the following measures were adopted:

The sanitary code of the Republic, the maritime sanitary regulations and the additions to Chapter II of those regulations, which have special reference to the bubonic plague, are the laws of International Sanitary Police which are intended to protect our country against the transmissible diseases which might come from abroad, and the public was warned of the necessity of observing them.

The ports designated as those which would be allowed to admit vessels from Mazatlan were Guaymas, Manzanillo, San Blas and Acapulco. In the last named port we had a lazarette already established.

All the inhabitants of Mazatlan who desired to leave by sea were allowed to do so, on condition that they were in the enjoyment of good health. For this purpose a commission was organized to examine the passengers, disinfect their baggage and the merchandise which might be shipped. This commission kept a record of the name, surname, sex, age, nationality, civil status, etc., of every person who desired to depart, and issued him a certificate stating that he was in good health at the time he left the port, and also that his baggage and goods had been disinfected. The delegate in the port had charge of the disinfection of the ship and cargo, the destruction of the rats and mice, and also issued his certificate that the ship was immune from the plague.

In order to supply the provisions required in Mazatlan, the vessels which brought them were made to anchor outside of the port and the Delegate of the Board would proceed to the ship's side in a boat for the purpose of receiving the provisions, but preventing all communication between the persons from shore and the ship's crew, after which the Delegate would issue a certificate of the manner in which the operations had been carried on.

Due to all of these precautions, the epidemic was stamped out within a period of six months. The diagram now presented to the Delegates can give a better idea of the work which was carried out.

As there is an epidemic of bubonic plague now in the City of San Francisco, California, the Government of the Mexican Republic has issued a declaration to the effect that it considers that port infected. The Board of Health has reminded its Delegates in the ports and frontiers of the legal provisions above referred to; it has made important repairs in its sanitary stations; has completed that of Mazatlan; has sent a disinfecting stove to Ensenada, and has supplied the principal ports on the Pacific Coast with anti-plague serum.

MALARIA.

As it is the duty of the Mexican Delegation to indicate the transmissible diseases which prevail in this Republic, and it has no exact figures available which would show the frequency of malaria, on account of the difficulties which hinder the collection of these statistics, the present report is limited to a map which shows the geographical distribution and comparative frequency of the disease. Nor can any consideration be given to the mortality returns because this disease does directly result in death, except in cases of pernicious fever, and malarial anemia, which predispose the patient to contract the other fatal disease, it does not figure amongst the causes of death.

As regards malaria, we already know the germ that produces it, the agent which transmits it, and the method of curing it; but, nevertheless, we find it scattered through such extensive territories and among so many different peoples, that we can only wonder that it has not yet been extinguished.

The fact is that the scientific problem is very simple, but the practice is very complicated. In fact the spread of the disease requires three factors, to-wit: A patient suffering from malaria; an anopheles mosquito to sting him, and a predisposed person to receive the inoculation from that mosquito.

Theoretically, the problem is solved by disassociating the first two factors, or by conferring immunity on healthy persons.

In fact, if we isolate the patient in rooms whose doors and windows are covered with wire netting, the mosquito can not get in to sting him.

If we could destroy all the mosquitoes of the genus "anopheles" there would be no agent to transmit the disease from the sick to the healthy man.

And lastly, if we could confer immunity on healthy persons, the propagation of malaria would be impossible.

But these resources which are so simple in expression, find great difficulties in their application, which we will try to set forth in order to study the means of overcoming them.

In diseases which assume an acute form, the patient, finding himself obliged to take to his bed, gives himself up, so to speak, to the Sanitary authorities; and this is what takes place in cases of bubonic plague, cholera, yellow fever, scarlet fever, measles, typhus, etc. But those who suffer from malaria, unless in the pernicious or ordinary acute form, are not confined to their beds; they go in and out of their houses, attend to their ordinary occupations, do not consult a physician, and therefore do not come under the supervision of the sanitary authorities until the disease assumes an acute form; but as these patients who suffer from the chronic form are liable to be stung by mosquitoes which are thereby infected, they are as much a source of danger as those who suffer from the acute form, whilst, on the other hand, as they are so numerous in marshy countries, it is almost impossible to subject them to isolation, which, if possible, would be a measure of unquestionable efficiency, as it is with regard to yellow fever.

The second measure would be the extinction of mosquitoes of the genus "anopheles." This work has been undertaken with great success in some parts, as, for instance, in Ismailia, where it was tried for the first time, and by ourselves on the "Eldorado," State of Sinaloa, as well as in other places where we had special services for the suppression of yellow fever. This method consists in the etxermination of the larvae of the mosquitoes, whenever they are discovered in water tanks or pools where the female deposits its eggs.

But if it is a question of such large areas as those in our territory which are occupied by immense swamps in which the mosquitoes breed in fabulous numbers, the resources which are available and practicable in the cities become impracticable in such an enormous scale.

There are still other resources, of which the principal consists in the drainage of marshy lands or the spreading of oil over the waters. The first of these methods has been carried out in England with success for many years back. The marshes are made to disappear either by drainage or by filling up. But this method, although really efficient, is slow and very expensive when the marshes cover a large area.

As regards smaller areas of water, we have the resource, which is always very effective, of covering them with a thin layer of petroleum. This method is the one which we are now employing in Merida, Progreso, Coatzacoalcos, Veracruz and Tampico, on the Gulf Coast, and Salina Cruz, on the Pacific. For the last four years our Government has appropriated large sums of money for the campaign against yellow fever and malaria, and these sums are employed all over the zone of the State of Veracruz which is included between Cordoba and Santa Lucrecia, and on the Isthmus of Tehuantepec.

When we have been able to extinguish yellow fever, the numerous staff that we have now employed in that campaign will go from district to district, executing the same efficient work which has been carried out in the place above named during the last four years.

The other resource which we have at our disposal through our knowledge of the germ of the disease and its methods of transmission is that of procuring the immunity of persons who may have to expose themselves to the bite of infected mosquitoes. The means which are at present available consist in the administration of salts of quinine, which is both preventive and curative. The experience acquired in Italy, in those parts of Africa where these salts have been employed, and in our own country, have demonstrated the efficiency of these methods, and we propose to employ on a larger scale under the supervision of the brigades which are now almost exclusively working against yellow fever. But in order to make the struggle against malarial fevers really effective and to convert it into a universal resource, it is necessary for us to preach by means of books, of the scientific and the general press, and of lectures, the doctrine

of the transmission of malaria and the powerful resources which are available against it, and not leave this task to the exclusive attention of the authorities.

I, therefore, propose to this Honorable Convention, that we commence a crusade against malaria, in the same lines as those which we have already undertaken against tuberculosis. If we can convince every man of the dangers offered by swampy countries, and that it is within his power to take precautions against the bite of the mosquito; if we could inculcate in him wisdom of sleeping under a mosquito net, of having the doors and windows of his dwelling provided with screens that will prevent the entrance of the mosquito; if we can teach him to cover with oil the pools of water which can not be drained or filled up; if we can accustom him to use small quantities of quinine which will afford him protection when he can not have that of the gauze curtains or screened doors and windows, we will convert each man into a co-operator in this great task.

I come to propose the adoption of these methods after having seen the practical and good results that they have given in our campaign against yellow fever, and also in view of the experience that we have acquired, even though in a small scale, in the "Eldorado" property, in the State of Sinaloa.

TYPHUS FEVER.

Typhus is a disease that has for many years prevailed in an endemic form in that tableland which is known by the name of Anahuac. At different periods it has assumed an epidemic form and sometimes has caused great mortality.

As this disease is already well known, the Mexican Delegation confines itself to a mere exposition of diagrams, so as to fulfill the program which governs the labors of this Convention.

The first of these diagrams, which covers a period of thirty years, from 1869 to 1898, inclusive, represents the number of fatal cases from this disease in each month of the different years, with a comparison of this mortality with that caused by diseases of another character. As the diagram shows, during this period there was a notable exacerbation of the disease commencing from 1875, maintained in 1876, decreasing during the last months of that year and again rising until it reached its maximum in April, 1877, and then remaining in an endemic form until 1883. From this year to 1892 there were outbreaks of slight importance; but in 1893 we had one of the most severe epidemics on account of its great spread and the number of deaths it caused. In 1897 there was a slight exacerbation that with unimportant variations declined in 1898.

Number 2 is a comparative diagram of the general mortality from typhus and that observed in the hospitals, showing the deaths caused in each sex. The diagram also compares these data with those relating to the rainfall during the years 1898 to 1906. During the period under consideration, there was an outbreak in an epidemic form during 1901, which declined during the months from June to November of that year, increased up to April, 1902, diminished up to September of that year, and with slight exacerbations during the winter it reached an endemic form during the following years, but with an increase from November, 1905, to February, 1906. It commenced to decline in April of last year and has now assumed an enedemic form.

In a general way we may say that the disease decreases during the rainy season and increases in the dry season. There is an almost constant ratio between the mortality observed in the hospitals and among the general public, as it may be seen since the year 1898, when a comparison was established between the data of the mortality registered in those establishments and the total number of deaths.

The third diagram, which represents the present year, only indicates the slight outbreak which took place in the months of January to March, and the well-marked decrease between the months of April and July.

The measures that have been adopted in order to combat the epidemic outbreaks, especially of late years, have consisted in the supply of good drinking water to the poorest quarters of the city which were not supplied; in improving the watering and sweeping of the streets and squares; in cleaning the apartment houses; in cleaning out the silt from the house drains, and in the removal of all refuse from the city. The isolation of the sick is carried out in their dwellings whenever possible, and when it is not, they are removed to the special

hospital provided for typhus patients, or else to the ward provided for them in the General Hospital. The houses are disinfected as soon as the patients are removed to the hospital, or, if they remain in their own dwelling, as soon as the disease reaches its termination. As the physicians who attend or casually see a person suffering from typhus are under the obligation of notifying the fact to the Sanitary Authorities, and the persons in charge of schools, colleges, workshops, factories, barracks, etc., are also under obligation to give notice of the cases which may occur in their respective establishments, we generally know where the disease makes its appearance. The sanitary inspectors of the Board of Health at once make their first visit and declare whether the patient can be attended at home or must be removed to the hospital, and they also notify the Board, so that it may order that removal and the respective disinfection at the proper time. If the persons attending a typhus patient are very poor the soiled clothing which they wear is exchanged for new and clean.

During the last epidemic, the Supreme Board of Health established special services for the supply of water, cleaning of the city, gratuitous baths, and wash houses, in order that the poor classes might have the free use of the same.

There are well founded hopes that when the water supply is increased, as it will shortly take place, up to 600 liters per day per inhabitant; when the sewer system is completed and the city well paved, and, specially when the old and poor quarters of the city are reconstructed and wide streets opened up which will give access to houses erected under hygienic plans, and when an improvement is made in the present evil conditions under which the poorest classes live; when all improvements are carried out, typhus fever will disappear from our city.

As the report presented by the Mexican Delegation has to cover the transmissible diseases which prevail in the Capital, we will close by stating that, as regards typhus, during the present year it has almost been reduced to the proportions of the usual endemia.

INTERNATIONAL SANITARY POLICE.

The facilities of communication between men, whether by land or by sea, have resulted in the greatest benefits to humanity; but as there is no benefit which is not accompanied by its corresponding evil, the same can be said with respect to the facilities which are afforded by steamship and railroad transportation.

In moving from one place to another, men carry with them the diseases from which they may be suffering. The International Sanitary Police has displayed the greatest care, sometimes to a very exaggerated degree, in its endeavors to prevent transmissible acute diseases from being brought into the ports of frontier cities, or in more exact terms, it has endeavored to put every obstacle in the way of the transmission of those diseases, by detaining those persons who are sick or suspected of suffering from those diseases, in the ships by which they have been transported or in special lazarettes. But as regards transmissible chronic diseases, no notice has been taken of them by the legislators before the present time, and nevertheless it is as necessary to protect ourselves from the acute transmissible diseases as from those which have a slow development and are therefore denominated chronic.

In these days when the Asiatic immigration encounters such great difficulties in its efforts to penetrate the United States of America, its current has been turned towards the countries of Latin America. In Mexico we receive every month one or two steamers in the port of Salina Cruz, some with Chinese and others with Japanese immigrants.

Our Sanitary Code provides that only those persons will be allowed to enter the Republic with the character of immigrants, when they are in possession of certificates which prove their perfectly healthy conditions, issued by the competent authority in the place of departure and viséed by the Mexican Consul. Under Art. 49 of that same Code, certificates which have been issued two months previous to the date on which the immigrant reaches our shores will be considered null and void.

This measure was found insufficient in practice because the immigrants might have started from their own countries with the diseases in a state of incubation and reach our ports with them already developed. It is to be noted that our situation lends itself greatly to the transmission of disease, because the ships do not touch at any port on their voyage but come directly from the Asiatic ports

to ours on the Pacific. In view of this, orders have been given with respect to Chinese immigrants, which may be briefly summed up as follows:—

The immigrants must come provided with certificates of health issued by a physician in the port of departure, and viséed by the Mexican consul in that port, or in his defect, by the United States consul.

Asiatic immigrants can only be allowed to land in the port of Salina Cruz, if they are more than ten in number; but when their number does not exceed ten, they are allowed to land in the ports of Acapulco, Mazatlan, Guaymas, Tampico, Veracruz or Coatzacoalcos.

Every ship which transports immigrants is received in accordance with the provisions of the Sanitary Code, the Maritime Sanitary Regulations, and the Special Ruling which may be issued by the Supreme Board of Health in each case and in view of the circumstances.

If there are none of these special circumstances present, the healthy immigrants are at once allowed to land and are directly taken over a special wharf, to the lazarette which is dedicated to them.

In this lazarette they are made to bathe, their clothing and baggage are disinfected, and they are kept under observation for a period of *ten days.*

If at the end of that period no disease has made its appearance amongst them, they are permitted to leave but also required to report to the Delegate of the Supreme Board of Health, the point to which each immigrant proposes to travel.

Up to the present, these measures have been sufficient to keep us free from cholera, bubonic plague and yellow fever; but they have not prevented the introduction into the country, which has actually taken place, of persons suffering from beri beri. As this disease was entirely unknown in Mexico, and on the other hand, the persons who were suffering from it in its first stages when it was not as easy to recognize the symptoms which render it so visible in a more advanced stage, several cases presented themselves in Salina Cruz, Tehuantepec and Sta. Lucrecia, which were confined to the immigrants themselves. As soon as the Sanitary Authorities discovered these cases, they immediately required that the patients should be reshipped to their own country and gave orders that no person suffering from beri-beri should be allowed to land.

Trachoma was a disease that in Mexico was only known to oculists, and it must have been so rare that a knowledge of it had not reached the generality of the medical public, and, still less, the laity. A distinguished ophthalmologist of Mexico, Dr. Lorenzo Chavez, had occasion to observe last year a small epidemic of trachoma in one of the Government schools, and called attention to the danger of its propagation. This fact led the Sanitary Authorities to fix their attention on the possibility of trachoma being introduced by the Asiatic immigrants, and on the danger of that disease spreading through the country. The Sanitary delegates in the ports having been warned, they commenced to note the number of persons suffering from trachoma who reached the Republic, and naturally it was found that those arriving in the Pacific ports were more numerous than those who arrived by the Gulf ports. In one steamer the number of persons suffering from trachoma was found to be 220.

The Supreme Board of Health then asked the Department of the Interior to prohibit the landing of such immigrants and they were therefore returned to China, and a ministerial declaration was obtained to the effect that immigrants suffering from this disease would not be allowed to land in any of the Gulf or Pacific ports of this Republic.

In order to prevent the introduction of any of the above diseases, a careful inspection is made of the immigrants before they embark in the port of Hong Kong, which is that from which the Chinese immigration generally proceeds.

For this purpose a physician has been sent to that port with the character of Delegate of the Supreme Board of Health, and commissioned to prevent the embarkation of all emigrants who may be suffering from bubonic plague, cholera and other acute transmissible disease.

We are now studying a law which will prevent the landing in our ports of persons suffering from tuberculosis, scrofula, malaria (acute for the moment) beri-beri, trachoma and other transmissible chronic diseases. It is likewise proposed to prohibit the landing of the insane, aged, idiotic children, those whose constitution is much debilitated by any previous disease or by organic weakness; the lame, one armed, humpbacks or deformed who may be unable to work; and of all those who may become a public charge.

We have hopes that if the Legislature will enact a law, which we now have under study, we will not only keep ourselves free from the diseases which hitherto have been unknown to us, but also protect our neighbors from those diseases by not admitting them into our territory.

I invite the Honorable Delegates to this Congress to suggest similar measures to those we have already adopted, to their respective Governments, or such as will soon form part of our Sanitary Legislation.

If all the nations of America would form a close alliance in order to prevent the introduction of the sick or incapacitated for work throughout the vast extent of our continent, we would contribute in a very efficacious manner to the improvement of the hygienic and social conditions of our respective nations.

ASSISTANCE AFFORDED BY THE GENERAL GOVERNMENT TO PORTS AND CITIES IN THE REPUBLIC TO CARRY OUT THE SANITATION AND WATER SUPPLY WORKS.

The Mexican delegation has stated in its report on the subject, what is the condition of the water supply works, sewerage, street pavement and all others which are executed or in the course of execution in the principal ports and cities of the Republic. For this reason, the present report will be confined to giving this Conference information as to the assistance rendered by the Federal Government in carrying out such works in the ports further on mentioned, as well as in the Capital of the Republic.

The Municipality of Tampico was granted a subsidy of $2,187,529.73 for the sanitation and water supply works of the city under the contract of the 15th of August, 1902. Under another contract executed on the 3d of September, 1906, for the continuation of the works in the second, third and fourth zones of the City of Tampico, the Federal Government granted a sum of $812,250.00, making a total investment in those works of $2,999,779.73.

For the purpose of assisting the municipality of Vera Cruz in the construction of sanitation and water supply works under the contract of the 28th of July, 1901, a subsidy was granted of $3,964,493.94. The Federal Government was charged with the arrangement, through the Department of Communications and Public Works, of the technical conditions of the contract executed with the company which undertook the work, as well as with the supervision and approval of the work, material and machinery employed therein, until its final completion.

A subsidy of $676,114.50 was granted to the Government of the State of Vera Cruz to assist in carrying out the sanitation and water supply works in Puerto Mexico (Coatzacoalcos), under the contract of the 2d of October, 1906.

In order to carry out the sanitation work in the City of Mazatlan the Federal Government granted the City Council a sum of $600,000 under the contract of the 13th of October, 1906.

The Federal Government executed four contracts on the 23d of May, 1899, 17th of March, 1905, 15th of May and 1st of November, 1906, for the execution of the harbor and sanitation works in Manzanillo, which were estimated under those four contracts at the sum of $7,882,760.00, and of this amount $7,348,241.99 have been expended up to the month of September last.

The sanitation and water works of the port of Salina Cruz are estimated to cost $1,104,313.30. Out of this sum, $885,240.68 had been expended up to the 30th of June last, leaving a balance of $119,072.62 available. An estimate has been prepared for special works to be undertaken in that port to supply water to the port works, amounting to $86,000, of which $37,677.57 had been expended up to the same date, leaving a balance of $48,322.43. The total appropriations for the works in that port amount to $1,190,313.30, of which $922,918.25 have been expended, leaving an available balance of $267,395.05.

And, lastly, in the capital of the Republic the following sums have been expended: In the Valley Drainage Works, $15,967,778.17; in the Sanitation Works of the city, $8,210,138.25, and in the Water Supply Works, $4,339,983.75, making a total expenditure on sanitary works in the capital of the Republic of $28,517,900.17. Besides this, other important sums figure in the estimates of the Department of the Interior which are required for the Water Supply, Sanitation, Drainage, Sewerage, Canals and General Cleaning of the city.

We therefore find that the Federal Government has appropriated the following amounts to the works above mentioned:

Port of Tampico	$ 2,999,779.73
Port of Vera Cruz	3,964,493.94
Puerto Mexico (Coatzacoalcos)	1,276,114.50
Port of Manzanillo	7,882,760.00
Port of Salina Cruz	1,190,313.30
Capital of Republic	28,517,900.17
Total appropriation	$45,831,361.64
Of this sum there is still available	801,913.06

MEASURES TO BE ADOPTED FOR THE PREVENTION OF TUBERCULOSIS ON BOARD OF SHIPS.

On board of vessels and especially in the passengers' cabins where persons suffering from tuberculosis have expectorated, it is extraordinarily easy to contract the disease, and in order to prevent the propagation of this terrible scourge, it is necessary to make strict application of the hygienic methods which we already know, and which are the easier as in this case we can count on the powerful support of the sanitary delegates in the ports, who can easily ascertain the hygienic conditions of the passengers and crew, and who in the event of finding any confirmed or suspected consumptive, can supervise the disinfection of the places and clothing he has made use of, and also require that he use the spittoons which must be profusely distributed throughout the cabins, berths, smoking room and even on the decks. It would be very desirable that passengers suffering from this disease should supply themselves with pocket spittoons.

Should the delegate discover either on the outward or inward visit the presence of any tuberculous person among the crew, he must prohibit such person from continuing his voyage in the ship, and should be desire to do so, he should only be allowed to go as a passenger, in such a manner that he may be confined to his berth. The confirmed or suspected cases of tuberculosis amongst the passengers should be placed in a berth without any curtains or other hangings, especially if they are difficult to remove for the purposes of disinfection. The berth should have a sufficient number of spittoons and notices pointing out the propriety of making use of them for expectoration. The napkins and vessels employed by the patient should be placed in boiling water for fifteen minutes immediately after use; in sweeping out and cleaning the berth care should be taken not to raise any dust, and nothing must be shaken; the bed clothing must be carefully folded and boiled for fifteen minutes before passing to the laundry. Whenever a tuberculous patient disoccupies a berth it must be carefully disinfected under the supervision of the respective delegate, and this disinfection will be carried out by soaking the walls and furniture of the cabin with a solution of 1 per 1,000 of bi-chloride of mercury and tartaric acid, and afterwards rubbing them with tow which must afterwards be thrown into the fire or overboard. Naturally all the metal fittings will be protected with grease against this solution, as they are liable to be attacked by the chloride. After the operation is completed, the tow will be passed over all the metal fittings and then burnt as above stated.

In order to avoid the spittoons from overflowing through the rolling of the vessel, it would be desirable to give them a cylindrical form with a conical upper and lower part connected by the respective apices, which could be in the form of a screw so as to facilitate cleaning, or else common spittoons could be employed and fixed to the walls by means of the "Cardan" frame. It would be desirable to have them fitted with two small side ears so that they could be easily placed in series like a voltaic pile, and carried without any fear of spilling their contents to the place where they are to be cleaned. The cleaning of the spittoons should preferably be made on the outside rail, and if possible, by means of a jet of boiling water. The stewards who carry out this operation ought to disinfect their hands with the solution of bi-chloride. In order to prevent the contents from drying the spittoons should always contain a certain quantity of water.

REPORT OF DR. RODOLFO B. GONZALEZ, DELEGATE FROM SALVADOR.

As Commissioner of El Salvador to the Third International Sanitary Convention, I come to comply with one of the obligations that the by-laws impose upon me.

The Government represented by me not having concurred to previous Conventions, I desire, before informing you as to the sanitary conditions of the Republic, to make a brief history as to its sanitary organization.

SANITARY ORGANIZATION.

In the year of 1900 the regulations of health now in force since then, were duly approved. These regulations created the Supreme Board of Health which has worked with perfect regularity since its foundation with a technical and distinguished staff.

It is formed by three members of the medical fraternity, a pharmacist and a consulting lawyer, as well as with the necessary employees for the service of the various departments of the Chemical-Bacteriological Disinfection, Statistic, etc., and with the administrative staff required by the Treasurer and the Secretary's office.

Politically, the Republic of El Salvador is divided in fourteen departments, and the Board has in each capital a commissioned physician acting in accordance with the by-laws of the code.

Every port of the Republic has a commissioned physician who is in charge of the disinfection—every port is equipped with the necessary disinfecting apparatus and everything pertaining to the International Marine Health.

Practically, they are branches of the Board, the General Direction of Vaccination, the Direction of Venereous Prophylaxis, the Slaughter House Inspection, Food and Beverages, the Direction of Alcohols and Liquors and the Board of Fomento and Waters.

The Board is, in conformity with the by-laws, an independent corporation which has incomes by itself created by the Law, but, in the administrative organization, it is dependent of the Government.

It conducts an official paper named "Bulletin of the Superior Board of Health," a monthly publication which publishes the official decrees of the Board, the reports of all the commissioners, the demographic statistics of the Republic, original works, etc., etc.

From time to time it publishes monographs to spread useful knowledge. It has been edited already, on account of the Board, and largely distributed, a number of pamphlets showing the prophylactic measures which must be observed to attack various epidemics, such as yellow fever, bubonic pest, as well as other pamphlets on the damages caused to the human organism by the use of tobacco and alcohols; on tuberculosis and the means of preventing the contagion; on syphilis and its prophylaxis; on vaccination and small-pox, and several others that I will place before the Secretary when I deliver the accompanying annexes to this report and which I have not received up to this writing, owing to a delay in marine communications.

GENERAL DIRECTION OF VACCINATION.

The vaccination and re-vaccination are free to all the inhabitants of the Republic. The respective regulations set forth that the vaccination be practiced three months after the birth—and before in case of an epidemic—and the re-vaccination every six years.

The Direction of Vaccination is in charge of preserving, distributing and propagating the vaccination all over the country. In order to properly fulfill the aforesaid, it has secured the necessary staff in the capital of the Republic and a vaccination physician in all the principal cities of the country. There are, furthermore, traveling vaccinators—the number varying according to the necessities, who are in charge of vaccinating in small towns and villages.

Since its foundation the office receives every fifteen days, without interruption, animal vaccinating fluid from the Bacterio-Therapeutic Institute of Berne (Switzerland), and from the Pasteur Institute of Paris, France.

Up to the last two years the vaccination has been practiced exclusively from

arm to arm, utilizing pustules from good vaccine. The animal lymph was kept in prevision of an epidemic of small-pox, but, as it was noticed that the human lymph was losing its activity with the times, with the continuous passes from arm to arm, it was decided to use from time to time the animal lymph to regenerate the human one, and with this method splendid results were obtained.

The Board of Health and the General Direction of Vaccination, in my charge, had been working for a long time in order to determine if it was better to give preference to the animal or human vaccination. For this reason a careful study of comparison was established, founded on the statistics, using the two vaccines on an equal number of persons, brought as far as possible to identical conditions.

The results obtained were not as conclusive as expected, as equally good results were obtained with both vaccinations and fortunately no failure with either of them. The studies on the matter were continued and a matter of so much importance is still awaiting a conclusion.

And as notwithstanding these experiments, real European eminences continued to allege that with the human vaccine the syphilis, tuberculosis, etc., could be transmitted, not taking into consideration other infections, which would be common to both vaccinations and as a rule dependent on the operator, it was resolved that, as long as this point remained unsolved in every respect, scientifically, only animal vaccine should be employed in El Salvador.

Taking the opportunity that, at that time, Dr. Gustavo Baron, a physician of vast illustration and a noted Bacteriologist, was going to Europe, he was commissioned to take up this important study. Dr. Baron, after visiting various European centers, went to Japan, and upon his return reported his views to this end.

It was decided to establish in El Salvador the National Institute of Animal Vaccination, annexed to Hospital Rosales, a magnificent establishment of charity, recently constructed with all the latest improvements that the modern science advises, and one of the best hospitals of the Continent.

The General Direction of Vaccination, reorganized in 1900, has vaccinated since then, over sixty thousand people, as could be seen by the corresponding statistics hereby attached. It can be said that small-pox plague has practically been exterminated in El Salvador, if it is taken into consideration that the majority of the inhabitants are vaccinated and that they are being vaccinated continuously with great activity, employing when required, the means of adherence set forth by the laws. In this respect it can be said that El Salvador has succeeded.

Some years ago owing to the war had by Mexico with the Maya tribes, a small-pox epidemic developed in the State of Yucatan. The epidemic went so far as Belice (British Honduras), thence to Honduras, in the adjoining departments with El Salvador. The epidemic was officially declared and although some cases were discovered at Pasaquina, Pespire, Valley of San Lorenzo, etc., all of them cities of El Salvador, it was not propagated, nor did it cause any deaths. The measures of disinfection and isolation taken were sufficient to control such a terrific epidemic.

All details with reference to this plague, can be found in the Bulletin of the Board.

El Salvador has had the satisfaction that in every instance that confluent small-pox has appeared in Central America with more or less epidemic appearance (sometimes by its own account and other by petition of the Government), it has been unable to send vaccinating fluid of acknowledged activity in sufficient quantity to establish the vaccination in the cities attacked by the epidemic.

NATIONAL INSTITUTE OF ANIMAL VACCINATION.

This most important establishment, founded two years ago, is amply equipped with every modern convenience to carry out its duties in every way satisfactorily. It has an adjoining department where calves destined to the vaccination are rigorously subjected to a clinic observation.

The vaccination as well as the lymph, its polarization, asepsis, bacteriological examination, putting up in aseptic tubes, sealed by lamp process, etc., are practiced in conformity with the minutest scientific modern prescriptions by the Director of the Institution, Dr. Baron, whose name alone is a guarantee.

The Institution produces at present one thousand tubes of lymph every month of the best obtainable quality, which is sufficient to answer the actual require-

ments, but in case of any epidemic it could produce over four thousand tubes per month.

El Salvador can certainly feel satisfied over the fact that in case of a plague of small-pox, it could offer to any country in the Continent, vaccinating fluid from its own Institute of the best obtainable quality and in sufficient quantity to overpower any plague.

All the apparatus, employed in the Institute of Salvador, are of French make, of the latest models, so far that in the catalogues they are headed, "Models of the Vaccination Institute of El Salvador."

During the last year, the animal fluid for vaccination has been the only one used in El Salvador, produced in the country, and excellent results have been obtained.

VENEREOUS PROPHYLAXIS.

This important branch of the public health is in charge of a General Director, who acts in accordance with the prescriptions of the code and with the respective regulations. The Central Offices are located in the capital, but there is a physician in every important town of the Republic and the necessary number of Health Police. A hospital or a clinic can be found in every town to attend to the sick prostitutes. In conformity with the regulations every registered prostitute must pass sanitary inspection twice a week. The Health Police looks after the clandestine prostitution, the most dangerous thing to the public health.

At the present time by-laws for prostitutes are under study.

This important office, founded several years ago, is in charge of the analysis of all the alcohols and liquors produced and sold in the country. A decree approved by the Superior Government determines the injurious substances that can be contained in alcohols, liquors and fermented beverages sold in the country.

This office is equipped with a complete chemical laboratory, where all alcoholic and fermented drinks are carefully analyzed, as they cannot be sold without previously passing this analysis and provided that the report of same to the General Director is favorable as to its chemical compounds. Both the report and the analysis are published in the Diario Oficial for the public's knowledge.

BOARD OF PHARMACY AND NATURAL SCIENCES.

It is forbidden, according to the laws of El Salvador, the liberty of professions, and therefore only those duly graduated are allowed to practice in the country as professionals.

The Board of Directors of the Medical and Pharmaceutical Faculty is in charge of enforcing the above law to see that no others but the academics from the faculty or those to it incorporated by previous examination or in conformity with whatever international treaties may exist authorizing the validity of such professional diplomas be permitted to practice in the Republic.

Every Pharmacy in the country is constantly subject to a close watch by the Board of Pharmacy and Natural Sciences. No other but those duly graduated in the Faculty can be in charge or represent a pharmacy or drug store, not even a physician having an authorization or diploma allowing him to act as a pharmacist is permitted to do so, according to the laws he cannot act as a pharmacist and physician at the same time, and must therefore practice as a pharmacist or as a physician.

It is absolutely prohibited to act as a physician and pharmacist. The head of a drug store is obliged to stay in it as long as the service of same may last. An agent of the Board is constantly visiting the drug stores and obtaining the signatures of their heads or representatives. The failure of any of them to be in the establishment at the time that the agent makes his visit is punished with a fine. A second failure to be in the establishment may be punished with the temporary or definite closing of the establishment.

The pharmacy regulations stipulate all the medical substances which must be carried in stock in a drug store and the appliances, instruments and all necessary apparatus for pharmaceutical manipulations and also the consulting books that must be handy to the pharmacist.

Any violation, no matter how insignificant it may be, is punished with a fine or the temporary or definite closing of the establishment.

Nobody is allowed to sell drugs of any kind, no matter how insignificant they

may be, without an authorization from the Board, which grants this right as a rule after previous examination of the drug. Such rules have given very good results to the public health.

The brief space of this report prevents me going into further details, some of them very important, and which can be found in the attached regulations.

The political situation of El Salvador, its topographical position and the density of its population, are other factors to show that it ought to be one of the most unhealthy countries. It is fortunately not so, as with the exception of malaria, which under all its forms and manifestations is endemic in the total extension of the Republic; no epidemic has whipped or depopulated the country for some time past, notwithstanding the fact that El Salvador has been always interruptedly in communication with zones more or less ravaged by some plague.

El Salvador has been unable to overpower, notwithstanding its constant effort to do so, that terrific spectre, tuberculosis, that universal whip that every day causes larger destruction of humanity.

The demographic curve shows a growing invasion, the mortality having reached the cipher—very alarming—of 6 per cent of the total deaths.

Actually, the malaria and the tuberculosis are, if not the only, the most terrific enemies against whom we must struggle in El Salvador. During the years of 1906-7 there was an epidemic of yellow fever. The epidemic attacked with preference all the foreigners not acclimated, also the military class. The epidemic spread in all directions localizing itself practically in zones (whose centers were the cities of Alequizaya, San Salvador and Chinameca) leaving intermediary cities completely undamaged. This occurrence attracted the general attention and originated the beginning of various studies on the subject. At that time, the mortality varied between thirty and forty per cent of the people attacked, varying in accordance with the region.

During those days entirely different ideas to those prevailing to-day, were had with respect to the etiology and pathogeny of the yellow fever plague, but in accordance with the prevailing ideas prophylactic measures were dictated, and adequate civil and military lazarettos were established and by these means the epidemic was exterminated.

At the beginning of 1900 the epidemic reappeared with the only exception that at this time it attacked with little intensity, caused few deaths and was overpowered in a short time.

Since that date only one case of small-pox has been accounted for and confirmed as having been imported from Panama, and only six suspicious cases have been reported but have caused no deaths.

The steps taken by the Board and the regulations issued have been sufficient to avoid the propagation of same. Not a single case of bubonic pest, cholera or trachome has been accounted for.

In 1902 a suspicious case of beri-beri in a Chinaman was discovered and cured.

As before stated, during such period some cases of confluent small-pox have appeared duly confirmed. The rapidity and energy employed in such cases has surely prevented the development of the epidemic or caused any death.

Last year, and undoubtedly owing to the fatigue of the service, an epidemic of meningitis, cerebrum-spinal infection in a epidemic manner like developed in the quarters of the First Regiment of Infantry attacking over one hundred men within a period of four months and causing as per the statistics a mortality not reaching forty per cent of the attacked ones. The epidemic did spread over various cities concentrating itself practically in the Military Quarters.

In view of this the Military Clinic was equipped with a lazaretto, a thorough disinfection was pursued in all the quarters, every suspicious person was isolated and those openly attacked were placed in other quarters. The military exercises were shortened to its minimum extent and all known prophylactic measures were applied in order to control the plague.

El Salvador has three ports properly fit for the trade of the country in large scale (Acajutla, La Libertad and La Union) and one for coasting trade (El Triunfo), all of which are on the Pacific coast and in fairly good sanitary conditions, with the exception of Acajutla and La Libertad, as these two ports are located on open roads and in a sea of many sand banks and naturally this makes the navigation somewhat difficult, even for small vessels. Very good steel docks have been constructed in these ports of considerable meters in length.

In order to avoid any possible grounding of the vessels owing to the number

of existing reefs, all vessels are anchored far away from these docks, about one mile, and of course this causes delays and inconveniences to the trade in El Salvador, but on the other hand, it favors the public health, since at such a distance the mosquitoes, agents of so many infections, can hardly reach there.

In every port the malaria fever prevails in endemic manner and it causes considerable damages in the inhabitants of such cities. The most unhealthy is Acajutla, and this is because it is located on the outlet of large rivers which, during the rainy season, very heavy in those regions, they overflow, covering great distances along the coast, and this naturally favors wonderfully the multiplication of mosquitos.

La Libertad is in much better condition, as far as the health is concerned, though its proximity to large inlets makes it malarious.

Very conscientious and careful studies in regard to the sanitation of these points have been made practically for the port of Acajutla, but the work of canalization and deseccation are estimated to cost millions of dollars, for which reason, notwithstanding the good will of the Government, the work has not been done.

Prophylactically, it has been advised the destruction of the mosquitoes, by means of the petroleo, the equipping of the sleeping rooms with wire nets, the planting of eucalyptus trees and several other measures until the above mentioned works of canalization and deseccation can be carried out.

Every important port, as previously stated, is fully equipped with large disinfecting apparatus under the supervision of Commissioners of the Board of Health.

Probably to this organization and to the energy employed in every case, is owed that, notwithstanding the fact that El Salvador is in close communication with countries infected with yellow fever (Panama and some places of the Mexican littoral) and of bubonic pest (Mazatlan, Peru and San Francisco, California), none of these terrific epidemics have developed in the Republic.

SANITATION OF THE CITIES AND WATER SUPPLY.

The Government has been always very cautious to improve the sanitary conditions of the country, and I can assure that if a great number of conscientious projects have not been carried out as desired, it has been on account of the financial crisis for some years existing in the Republic, and this crisis is originated by two strong reasons: El Salvador is exclusively agricultural and, if not the only, its principal source of wealth is the production of coffee.

The decrease in price of this product in foreign markets and the continuous fluctuations in the value of silver, determines this crisis.

Notwithstanding this sensible crisis, in its good will of carrying out this work as soon as possible, the Government created the Board of Fomento, one for each town and resources for self-sustaining have been granted to each one in order to facilitate their effecting the sanitation works as soon as possible.

Fortunately the idea was crowned with complete success. In a very short time sanitary and ornamental works have been effected all over the country.

A splendid sewer system was granted to the capital of the Republic, and is being completed with great activity, in accordance with the incomes of the Board. On these works more than one hundred thousand dollars were spent last year, without taking into consideration what was spent in the ornamental works of the city.

The most transcendental and important work heretofore effected in the capital, is undoubtedly the supply of water commenced but last year, and which is nearly completed. It was necessary to construct dry docks, pressure tanks, etc., and effect great engineering works in order to change the old system. The Government is about to purchase new water pipes actually installed by private concerns, and this will supply every resident of the city, when the whole work is completed, with over 150 litros of water during the twenty-four hours.

The following information will give an idea of the importance of the work in question:

As soon as the estimates presented by Rosing & Brothers, of London, were accepted, nine steamships were employed for the transportation of 19,528 packages of pipe, with a total weight of 2,904,508 kilograms and valued at £24,006-14-8. Fire, irrigating materials, etc., were purchased and amounted to £2,045-17-10.

The expenses for accessories, transportation, unloading, etc., were estimated over $40,000. If the engineering and labor expenses are added to the above, it will be easily understood that over a million dollars has been spent up to this date.

Full details with reference to this work are hereby attached.

Similar works,, although of less importance, have and are being effected in almost every city of the country. And, it must be noted, that all these works are dependent of a sanitary plan previously conceived.

Furthermore, the Honorable Legislative Assembly voted in favor of the Municipalities large sums for the purchase of water pipes as well as for the improvement of the sanitary conditions of its meat markets, hospitals, cemeteries, etc., etc.

It must be known also that every town is equipped with good hospitals, some of them as good as the one existing in the capital, really notable, and all of them are supported by the Government.

Several millions of dollars have been invested already in the supply of water and sanitation of the cities.

HEALTH POLICE LAWS.

In order to improve the sanitary conditions of the country, the following by-laws have been issued for the Health Police:

To avoid the damages caused by organic fermentations, it was resolved that all sweepings should be incinerated in special cremation ovens as soon as they were collected from the streets. This work is supported by the Municipality.

It was resolved that every unhealthy establishment should be removed from the center of the city, sanitating a special perimeter of them.

It was also resolved that the agents of the Board should visit or inspect every private house in the city once a week.

It was imposed that the waste pipes should be connected to the regular sewers by means of water closet plugs, as per design selected by the Board.

Regulations for the barber shops were issued recommending the disinfection of all instruments and appliances used, as well as the proper disinfection of the hands and clothes worn by the barbers.

It was also resolved the disinfection from time to time of the churches, and regulations for the disinfection of confessionaries were duly issued.

They made it compulsory for every physician to report to the Board of Health, all the cases of tuberculosis found in their daily practice, in addition to the sicknesses stipulated in the code of laws.

It also imposed the periodical disinfection of the street cars, prohibiting to spit on the floors of same, under heavy fines.

Physicians for the sanitary inspection of schools were employed and a certain amount of money was voted for the purchase of medicines for the poor children.

A concourse of physicians was opened for the sanitation of the city of San Salvador, granting a prize of some consideration to the author of the best project.

The clothing and bed clothes ot the soldiers were frequently disinfected.

A Military Sanitory was duly organized to isolate soldiers attacked by some contagious sickness.

Two wards were founded for the isolation of people attacked with tuberculosis (one for male and another for female) equipping them with all that was necessary for good service.

Annexed to the Slaughter House Inspection, a Bacteriological Section was organized for the diagnosis of cattle destined to public consumption.

It was imposed the fumigation of all mail incoming from suspicious countries.

Regulations for bars, restaurants and hotels were issued, stipulating the obligations of these establishments with reference to the health ordinances.

The disinfection of private houses was imposed and to that effect portable apparatus of the Board of Health were used in contagious cases. This service is obligatory and free to the poor.

The handling of coffee was regulated to protect the public health.

The Animal Vaccination, Chemical-Bacteriological and Electro-Therapeutic Institutes were established.

The Supreme Board of the Red Cross, with delegates in every city of the Republic, was founded, so that in case of war, epidemics, etc., it would aid the country as much as possible.

Several pamphlets were published and largely distributed showing the regulations to be observed by the public and the precautions to be taken in case of an epidemic to avoid the contagion.

The transportation of sick people in public coaches was absolutely prohibited, imposing the disinfection of these vehicles from time to time.

Until the Supreme Government of El Salvador appoints the three physicians or officials of health, destined to form part of the International Health Commission, informer of the sanitary conditions of the American Republics, it is to the Supreme Board of Health of the Republic whom concerns this duty. This Honorable Corporation is the supreme sanitary authority of the country and it is also supposed to inform about the establishment of the Sanitary Inspection Bureaus of Montevideo (5th clause) and about the establishment of relations with the International Office, organized in Washington, and with the International Office of Paris, France.

The Supreme Government of El Salvador adheres itself to the International Sanitary Convention held in Washington on October the 14th, of 1905, and signed "ad referendum" by the Delegates of the Republics of Chile, Costa Rica, Cuba, Republica Dominicana, Ecuador, United States of America, Guatemala, Mexico, Nicaragua, Peru and Venezuela, and at the proper time will take up this matter diplomatically.

REPORTS OF THE DELEGATES FROM THE UNITED STATES.

The delegation of the United States to the Third International Sanitary Convention of American Republics submitted the following reports provided for in the provisional program issued June 17, 1907:

REPORT OF SANITARY CONDITIONS, BY SURGEON-GENERAL WALTER WYMAN, U. S. PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

Since the adjournment of the Second International Sanitary Convention in Washington, October 14, 1905, the general health of the Republic has been excellent, and distinct advances have been made in the solution of various sanitary problems.

The agreement signed *ad referendum* at that meeting was signed by the President of the United States with the advice and consent of the Senate on May 29, 1906. The principles and regulations it embodies for the international control of the quarantinable diseases have been accepted and are now in force. The International Sanitary Convention of Paris, which was signed *ad referendum* December 3, 1903, and which was used as an exemplar in preparing the international sanitary convention at Washington, was also proclaimed by the President May 18, 1907. This latter convention, in addition to codifying the measures relating to the prevention of the spread of plague and cholera, provided for an International Sanitary Bureau at Paris. Since the United States had subscribed to this Convention, it was deemed important that it should be represented in the International Sanitary Bureau provided therein.

The Government of Paris was entrusted with the task of presenting to the nations represented at this meeting propositions regarding the organization of the International Sanitary Bureau of Paris, and a draft of the by-laws to govern this new institution was accordingly prepared and submitted to the signatory powers with the view to facilitating the exchange of the propositions of the various Governments concerned regarding the organization in question.

An agreement was reached between the French and Italian Governments to hold at Rome a conference of delegates of the participating nations who would be provided with special instructions. This conference was accordingly convened in Rome, December 9, 1907, Passed Assistant Surgeon A. J. McLaughlin of the U. S. Public Health and Marine-Hospital Service representing the Government of the United States. The recommendation of the Third International Conference of American States at Rio Janeiro in August, 1906, respecting the establishment of relations between the International Sanitary Bureau of Washington and the Bureau Sanitaire Internationale of Paris were borne in mind in arranging for representation at this Conference. In addition to arranging

the details of its organization, the Conference at Rome will consider the question of its relation to the International Sanitary Bureau of Washington.

Since the date of the last Convention two of the quarantinable diseases have been reported in the United States. Smallpox has been reported annually in different sections of the country since the epidemic of 1902. These reports indicate, however, that there has been a steady annual decrease in the number of cases, that the disease has been of an unusually mild type, and that there has been a marked decrease in the annual death rate from this cause up to the present time.

The measures taken by the Public Health Service and local authorities is referred to later.

BUREAU OF PUBLIC HEALTH OF THE UNITED STATES.

Five years of administration under the above-mentioned Act of Congress (July, 1902) by which a Bureau of Public Health with six well-defined divisions was established, have demonstrated the beneficial influence of this law, and, considered with a previous law establishing the Hygienic Laboratory "for the investigation of infectious and contagious diseases and matters relating to the public health," it would seem that Congress has established a public health bureau with a broad foundation. But more than this, it has provided a service whose personnel consists of trained medical and scientific officers devoted only to the interests of public health.

The Hygienic Laboratory, through its Advisory Board, composed of members attached to other leading laboratories, is brought in touch with the scientific work of other institutions of the United States, while the more practical questions concerning the suppression of disease and sanitation are the subjects of discussion with the State boards of health, whom the Surgeon-General is obliged by law to invite to meet in annual conference. The law also provides for more frequent conferences.

Thus the service receives and bestows the advantages of scientific affiliation, and its practical work is co-ordinated with that of the State and municipal health authorities.

INVESTIGATION OF TYPHOID FEVER IN THE DISTRICT OF COLUMBIA.

One of the most interesting and important duties of the service during the past year has been the investigation of typhoid fever in the District of Columbia.

A bulletin of 360 pages containing the report on this subject has been widely recognized as a valuable addition to modern knowledge of the transmission of this disease. It has already been productive of excellent results in that it has led to the closing of wells in the District and agitation of the subject of the milk supply, and of the necessary measures to rectify the insanitary conditions on dairy farms. It has called into prominence a number of factors in the spread of typhoid to which too little attention had been paid.

Though primarily an investigation of the fever in the District of Columbia, the report is of practical value to the administrative officers of all municipalities. It was found, however, that to solve all the problems connected with the investigation, the board of officers detailed for this purpose should be continued. Much additional information has been obtained, and will form the subject of a second volume.

Investigations of the same disease have been made in Savannah, Ga., and Charlotte, N. C.

INVESTIGATION OF THE MILK INDUSTRY.

Another and allied investigation is that of the milk industry "from farm to consumer," undertaken by special direction of the Secretary of the Treasury and the President, in which the Bureau has had the co-operation of the Bureau of Animal Industry and the Bureau of Chemistry of the Department of Agriculture.

This work has been completed and will soon be published.

No sanitary subject is engaging greater attention in the United States at the present time than that of milk, which, more than any other substance, unless it be bread, is the universal food.

The report contains some twenty articles bearing upon practically every phase of the production and transportation of milk from the farm to the consumer, the

diseases which it carries, and the most recent advances in its bacteriology and chemistry. To assure clean milk of good quality is one of the most important duties of health officers, to whom this report will give assistance in this endeavor.

SUPERVISION OF VACCINE AND CURATIVE SERUMS.

The supervision of vaccine virus, serums and toxins, under the law of July 1, 1902, has been carefully maintained, and it may be said that the effect of this law has been excellent. Fourteen establishments in the United States, one in Germany, and one in England, have been critically inspected, and given licenses by the Secretary of the Treasury. The regulations require that each of these establishments shall be inspected every year, precedent to the renewal of the license. The inspections are made by qualified officers of this service, who make reports upon blank forms on which are itemized every feature of establishments inspected, including the equipment, professional methods, and the products for which license is desired. These products, some of them, are obtained at the establishment itself, but more frequently are bought in the open market, and tested for purity and potency in the Hygienic Laboratory. The reports on the Laboratory investigation and from the Inspecting Officer are forwarded to the Bureau, where they are reviewed by the Bureau Sanitary Board. Based upon these reports and the recommendation of the Surgeon-General, the Secretary of the Treasury issues the license.

It will be seen that great care is exercised in the enforcement of this law, which is so essential to insure purity and potency of this most important class of therapeutic preparations.

HOOKWORM DISEASE.

One of the most interesting and important subjects coming within the purview of the Bureau has been the prevalence of hookworm disease as discovered by an officer of this service while investigating the cause of the bad physical condition of certain mill laborers, particularly child-laborers. The unfortunate physical condition of so many of the child-workers in the mills has been found to be due in large measure to this disease. The medical zoologist of the service was detailed to assist the Commissioner of Labor in his investigation of woman and child labor in the United States under the law of January 29, 1907.

A previous report upon hookworm disease, particularly in the South, was made by the zoologist of his service in 1903, and following his published report the matter was taken up in Porto Rico where much of the anemia and weak physical condition that prevailed among the working classes was found to be due to this disease. So important was the matter that the Porto Rican Government made a large appropriation and appointed a commission to eliminate the disease among the inhabitants, which it has in large measure accomplished.

The full report of this year's investigation has not yet been received, but occasional reports show very clearly that the prevalence of hookworm disease in the States in which investigation has been made, is sufficient to account in large measure for much of the hitherto unexplained anemia and physical debility. Hitherto these cases have been attributed to malaria or other debilitating diseases.

One of the chief factors in the spread of the disease is soil pollution.

TUBERCULOSIS.

With regard to tuberculosis, the suppression of which is engaging the activities of all civilized countries, the operations of the general government relate to the exclusion of immigrants thus affected, the carrying out of the President's Order for the prevention of the spread of this disease among government employees, the maintenance of sanatoria for tuberculous patients of the Army, the Navy, and the Public Health and Marine Hospital Service, and the encouragement in so far as the general government may participate, of all efforts of States and municipalities for its suppression.

The Sanitorium for tuberculous patients conducted by this service at Fort Stanton, New Mexico, continues to give good results, 101 patients having been discharged cured of the disease during the past year.

HYGIENIC LABORATORY.

The scientific work of the Hygienic Laboratory of the service, as expressed in the bulletins issued therefrom, has excited widespread and favorable comment among scientists and public health officials both in this country and abroad. Plans for the additional building to cost $75,000 authorized by Congress at its last session, have been prepared, and it is expected that the new building will be erected within a year, thus doubling the capacity of the laboratory.

Twelve qualified scientists and twenty employees compose the present working force of the laboratory, but for special investigation officers from the general service are detailed from time to time as required.

PLAGUE IN SAN FRANCISCO.

A fatal case of plague was reported to the Bureau from San Francisco in May, 1907, a little more than three years after the last case had been reported in the outbreak in the same city, which, bginning in 1900, was not ntirely eradicated until February, 1904. No case immediately followed this case reported in May, but on the 8th of August, three months afterwards, another case was reported, and up to November 19, 1907, there have been in all about 100 cases. The origin of the present outbreak it has been impossible as yet to discover.

A full report upon this matter will be included in the report of the service for the year ending June 30, 1908. A brief statement of the transactions up to the present time (date of this report) is here made.

The cases at first appearing along the wharves, on the water front, and in old Chinatown, were subsequently not confined to any particular section. Measures were at once taken to prevent the spread by vessels to any other port, domestic or foreign, by establishing a fumigation service for destruction of rats on all vessels leaving San Francisco harbor, at the same time requiring a careful inspection and refumigation if necessary at all domestic ports on the Pacific Coast. The local and State authorities were active in their measures to suppress the disease in San Francisco, assisted by officers of this Service, but on September 4 a telegraphic request was sent to the President by the Mayor of San Francisco, requesting the federal government to take immediate charge of the work of suppression. The Surgeon-General of the Public Health and Marine Hospital Service was instructed by the President and the Secretary of the Treasury to comply with the request. An experienced officer was detached from his duty as Sanitary Director of the Jamestown Exposition and immediately sent to take charge of measures in San Francisco. Eight commissioned officers were sent to assist him, and he was authorized to appoint six acting-assistant-surgeons and other employees. Recently, by urgent request of the local and State authorities, he has been authorized to employ laborers and to undertake certain other details of the work in further extension of aid to the city. The commanding officer reports that the disease is diminishing, that the organization is complete, and the work, which consists largely in the destruction of rats and the correction of insanitary conditions, is being pushed vigorously. He states, however, and in his view the Bureau concurs, that while the disease may be kept in check, it will necessarily require a long time for its complete eradication.

A case of plague was reported in Seattle, State of Washington, in October, 1907. The Governor of Washington and the health authorities of the State and city requested the service to take charge, and with the approval of the Secretary an experienced medical officer was sent to Seattle and has organized a thorough system of inspection and disinfection, the State and local boards of health cooperating. Two cases have been reported from Seattle, but no case has been reported since October 30th.

The national quarantine service has required a more than usual activity on the part of the Bureau during the last year. There are 43 national maritime quarantine stations in the United States, and at these 4,635 vessels were inspected and 478 disinfected.

The Act of Congress approved June 19, 1906, provided for the taking over of the principal southern quarantine stations that were still under State administration, and under this law the service has acquired possession of all the quarantine stations of South Carolina and the Mobile and New Orleans quarantine stations. A site has been selected also at Galveston, where it will be necessary to erect a new station at a cost of $100,000.

The national quarantine service now has jurisdiction over the whole of the Pacific Coast, the Gulf Coast with the exception of Texas, the Atlantic Coast with the exception of Baltimore, New York, Boston, and a few of the neighboring minor ports. These remaining State or local stations, however, are required to enforce the national regulations.

A very important and interesting portion of the quarantine service is the fruit port inspection service, medical officers being stationed in ten of the principal fruit ports of Central and South America, detailed by the President in the offices of the American consuls, to insure such care in the sanitation of the vessels as to warrant their admission at the southern ports of the United States without detention which would destroy the fruit. The effect of these officers in the fruit ports is most salutary, and has enhanced their sanitary condition.

The quarantine administration in the Philippines, under officers of this service, has been so successful as to excite much favorable comment. The medical officer in charge of the national quarantine there is also Commissioner of Health of the Islands. There has been practically no plague or smallpox in the Philippines during the past year. The service conducts 7 maritime quarantine stations in the Philippines, 7 stations in the Hawaiian Islands, and 8 in Porto Rico.

In addition to the medical inspectors in fruit ports there are medical officers at the principal ports of Japan and China, one at Calcutta and one at Naples. Besides their quarantine duties, these officers also examine departing emigrants.

A great aid to the administration of the quarantine service are the bulletins of public health (Public Health Reports) issued weekly to quarantine officers, consuls, and sanitarians, both at home and abroad. These contain timely information regarding all epidemic diseases throughout the world.

Besides this regular publication, the Bureau has transmitted to health officers and others short bulletins on vaccination, methods of suppressing smallpox, precis on scarlet fever, diphtheria and measles, a pamphlet on vaccination, articles on malaria, on the climate of New Mexico, and two works of especial value by officers of the service, one on trachoma and one on yellow fever and the mosquito. In these last two volumes are included the latest and most scientific considerations of the diseases to which they relate.

The professional work connected with the medical inspection of immigrants has been largely increased, 1,285,349 immigrants being inspected at the ports of arrival during the fiscal year, 1907. Many immigrants, it is true, are inspected at foreign ports, but the chief reliance is on the examination at the port of arrival. The last immigration act, approved February 20, 1907, imposes additional responsibilities on the service, and new regulations have been prepared to meet the changes and additional duties called for by the new law. The quarantine officers at the foreign ports, excepting fruit ports, examine emigrants in addition to their other duties, and the service inspection of arriving immigrants is carried on in our insular possessions, namely, Porto Rico, the Philippines and Territory of Hawaii.

At Ellis Island, New York, in addition to the inspection service, the large hospitals are under the medical supervision and professional care of officers of this service.

Third. The International Congress of Hygiene and Demography, which meets every three years, and which in Berlin, Germany, has been invited by the President, through the Department of State, as authorized by Act of Congress, to hold the next meeting in 1910 in Washington. The Congress has accepted the invitation.

By participation in these Congresses the service both bestows and receives inspiration and information of practical value.

For the performance of the duties as outlined above, the personnel of the service numbers 118 commissioned medical officers, 3 special scientists in the Hygienic Laboratory, 255 acting assistant surgeons, 47 pharmacists, and 851 employees. The Bureau force consists of 6 commissioned medical officers, 22 clerks, and 6 employees.

The total funds available for use of the service during the fiscal year 1907 amount to about $2,800,000.

REPORT OF THE SANITARY LAWS ENACTED SINCE OCTOBER 14, 1905, PRESENTED BY SURGEON-GENERAL WALTER WYMAN, U. S. PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

Laws for the improvement of sanitary conditions are issued by both Congress and the several State legislatures, and, in addition, ordinances for the control of sanitary matters within municipalities are prescribed by the governing bodies of those corporations. Local sanitary matters, though they may be, and very often are, of great domestic importance in every State in the Union, are cared for by the individual municipalities or States. On the other hand, Congress exercises its legislative power regarding sanitary matters as they pertain to the seat of Government, as they affect the States in their relation either to each other or to the central government, and as they are codified under international agreements.

The most important national legislation enacted thus far had for its object the prevention of the introduction of contagious diseases into the United States; the prevention of the transmission of such diseases from one State to another, and the eradication of transmissible diseases by co-operating and extending aid to State and municipal boards of health.

The experience of recent years has demonstrated the necessity, in the interest of the public health and in the public business, of uniform regulations to prevent the importation into the United States of yellow fever and other diseases, and their spread from State to State in the unfortunate event of their introduction. In consequence of a recognition of this fact, an Act was passed by Congress and approved by the President June 19, 1906, further protecting the public health and making more efficient the national quarantine.

This Act provides for the establishment of four additional national quarantine stations at points best suited for the purpose to prevent the introduction of yellow fever into the United States. It prescribes the manner of selecting the sites, and provides for the punishment by fine and imprisonment of all persons entering the limits of quarantine grounds and anchorages, or departing therefrom, in disregard of the quarantine laws and regulations. It also provides for the punishment by fine and imprisonment of masters and owners of vessels for violation of the quarantine laws and the regulations promulgated thereunder.

Certain amendments to the quarantine regulations have been prescribed by the Secretary of the Treasury under the authority conferred on him by law. The two amendments of most importance are those of February 28, 1906, and April 15, 1907. The effect of the former was to cause the close quarantine season to begin March 15, instead of April 1, with regard to vessels from ports known or suspected to be infected with yellow fever and arriving at Southern ports, either direct or via Northern ports. The latter prescribes regulations under which vessels from foreign ports with perishable cargoes of fruit are permitted to enter Southern ports in the United States without detention.

An Act of Congress, approved March 4, 1907, requires the inspection of all cattle, sheep, swine, and goats, the meat and meat food products of which are to be used in interstate or foreign commerce, before they are allowed to enter any establishment in which they are to be slaughtered, the postmortem examination of and inspection of the carcasses of all such animals, and the destruction of such carcasses or parts of carcasses as may be condemned; and forbids the offer by any person and the receipt by any carrier, for transportation from one State to another or to any foreign country, of any carcasses, meat, or meat food products which have not been inspected, examined, and marked "Inspected and passed." The Act also provides for the sanitary inspection of establishments in which cattle, sheep, swine, or goats are slaughtered for use in interstate or foreign commerce.

Congress also passed a law which was approved June 30, 1906, preventing the manufacture, sale or exportation in interstate commerce of adulterated or misbranded foods, drugs and liquors.

During the same session of Congress two sanitary police laws which relate to the District of Columbia were passed. The first, approved May 1, 1907, creates a board for the condemnation of insanitary buildings; confers on this board jurisdiction and authority to examine into the sanitary condition of all

buildings in the District, and to condemn those buildings which are in such insanitary condition as to endanger the health or lives of the occupants thereof, or persons living in the vicinity, and to cause all such buildings to be put in sanitary condition or to be vacated, demolished and removed. Provision is made for legal proceedings on the part of the owners of the condemned buildings, who are thus given the right to file objections against the order of condemnation. The other Act requires every person in charge of a patient suffering from diphtheria, scarlet fever, measles, whooping cough, chickenpox, epidemic cerebro-spinal meningitis, or typhoid fever, to make a report to the health officer stating the name of the disease, the name, age, sex, and color of the patient, the school which he or she has attended, if any, and the location of the place where the patient can be found. On the termination of the disease, either in recovery or death, the health officer is to be notified. Under this law the Commissioners of the District are authorized to make such regulations as may be necessary to prevent the spread of the diseases named. Both of these laws apply only to the District of Columbia, and must, therefore, be regarded as local rather than national in their application.

The Fifty-ninth Congress during its first session also made provision for an investigation as to the prevalence of tuberculosis among the Indians, and the desirability of establishing a sanatorium for the treatment of Indians afflicted with this disease, as follows:

That the Commissioner of Indian Affairs, under the supervision of the Secretary of the Interior, is hereby authorized to investigate and report to Congress upon the desirability of establishing a sanatorium for the treatment of such Indians as are afflicted with tuberculosis, and to report upon a location and the cost thereof, and also upon the feasibility of utilizing some present Government institution therefor; said report to include, as far as possible, the extent of the prevalence of tuberculosis among Indians.

With a view of preventing the spread of tuberculosis among employees of the various Government buildings, offices and workshops, the President issued an Executive Order, dated February 28, 1906, providing for the inspection of the Government offices and workshops, the preparation of pamphlets of instruction, regulations, and anti-spitting notices.

Provision was also made in this Executive Order for the examination of persons suspected of being afflicted with tuberculosis, such examinations to be made in laboratories at Government expense.

Since October 14, 1905, many important laws have been enacted by the various State legislatures for the protection of the public health and the improvement of sanitation within their jurisdiction.

These measures are of wide applicability and meet needs in the several States for which they are intended. Not less than eight States have enacted laws preventing the manufacture, sale or transportation of food, drugs and liquors within their borders. A number have passed laws relating to the control of water supplies and sewage. Provision has been made for a number of State sanatoria for the treatment of tuberculosis. Acts have been passed in New York and New Jersey providing for the abolition of mosquito breeding areas and for draining swamps and other low lands.

A legal enactment in Mississippi requires the State Board of Health to prepare rules and regulations for the proper disinfection and sanitation of public buildings, railroad depots, and all railroad coach and sleeping cars operated in the State. Other enactments of the various State legislatures relate to the collection of statistics, the increased power of boards of health, the control of conditions under which meats and milk are produced, and regulation of the registration of medical practitioners.

ABSTRACT OF REPORTS ON THE SANITATION OF AMERICAN PORTS PRESENTED BY DR. WALTER WYMAN, OF THE UNITED STATES DELEGATION.

Official reports received from various municipalities located along the coasts of the United States indicate that steady progress is being made in the improvement of sanitary conditions. The financial burden accompanying this

work is assumed by the interested municipality or State. Government improvements undertaken in the interest of interstate and foreign commerce and the establishment and maintenance of national quarantine stations are the functions of the national government. The control of water supplies, the disposal of sewage, the paving of streets, the provisions for housing, etc., have thus far been administered by local authorities. The extent of this work in a number of the cities is outlined in the following abstracts of reports submitted by officers of the U. S. Public Health and Marine Hospital Service.

BALTIMORE, MD.

The only system of drainage in operation in the city of Baltimore at the present time is that for the disposal of surface water. These drains empty into a small stream which discharges into the harbor. Owing to the topography of the city they are efficient except at times of maximum precipitation when low lying portions of the city may be temporarily flooded. These storm drains also receive the sewage from dwellings provided with water closets, about one-third of the houses disposing of their sewage in this way. Under an enabling Act of the Maryland Legislature, the city has incurred a bonded debt of $12,000,000 for the purpose of constructing a complete system of sewers and sewage disposal. This work is well under way and will probably be completed within seven years. The system will comprise about four hundred miles of main and branch sewers with disposal works located on Back River. The system of disposal as contemplated will consist of treatment in septic tanks, followed by sprinkling over filter beds of broken stone and final purification by intermittent filtration by artificial sand filters. The effluent will be discharged into Back River 14 miles from its outlet into Chesapeake Bay.

The water supply is obtained from two sources, the water being received in a system of settling reservoirs with an aggregate capacity of approximately one billion gallons. The lower levels of the city are supplied by gravity; the high service is provided for by three pumping stations and the necessary standpipes; the capacity of the settling basins is barely sufficient for present needs, and the watersheds are subject to pollution. It is understood that the water department proposes to ask for an appropriation of $5,000,000 for the purchase of the entire watershed of the Gunpowder River in order to protect it from pollution and for the erection of a reservoir of twenty billion gallons capacity. Should this plan be carried out, the supply from one of the present sources, the water shed of which is well polluted, will be discontinued.

The sanitation of dwellings will be provided for as far as sewage disposal is concerned upon completion of the new sewerage connection, and their sewage is received in cesspools and privy vaults. City ordinances require that the latter be ventilated and made water tight.

Paving of a modern and sanitary character is being slowly substituted for the Belgian blocks and cobblestones now in use.

Mosquito extermination has been inaugurated by the Health Department. The measures consist of the filling or draining of collections of water and of periodical oiling when other methods cannot be employed.

NORFOLK, VA.

The Health Commissioner of the City of Norfolk, in a report dated October 5, 1907, states that for the year ending September 30, 1907, the following diseases occurred: Diphtheria, 159; Scarlet Fever, 69; Smallpox, 50.

The water supply is derived from lakes located about 4½ miles from the city. The water flows into a concrete basin, is treated at the intake with alum solution at the rate of ⅞ grains to the gallon, and also treated by sand filtration. The sewage, for the most part, is removed through house drains connecting with main sewers, and by means of a pumping system is carried to various stations, and from there pumped into the river. The city is generally sewered, but few surface closets being in use, and these are confined mainly to the outlying districts.

The collection and disposal of garbage is carried on, daily collections being made in summer and disposed of by cremation.

An anti-mosquito campaign has been carried on during the present year with favorable results, and the Department of Health has been active in other lines of sanitation.

SAVANNAH, GA.

The water supply is obtained from artesian wells, and is abundant. The water though hard is free from contamination.

The sewage is removed by means of two systems of sewerage, one for surface drainage and the other for house drainage. These systems are protected by city ordinances and enforced by supervision and inspection.

MOBILE, ALA.

The water supply is obtained from two sources—small creeks fed by springs. Both stations are provided with reservoirs at an altitude of about 210 feet above the city. Each reservoir has a capacity of about ten million gallons.

The drainage and sewerage system covers about 75 per cent of the area of the city. As groups of houses are built, drains and sewers are constructed, and property owners are compelled by law to make the necessary connections. During the year ended March 15, 1907, 1,373 feet of 8-inch sewers were laid, and at present about 500 feet are under construction. The garbage is collected by the city twice daily where necessary, at all other points, once a day. This garbage is dumped and covered with earth, notwithstanding the recommendation of the city health officer for the construction of a cremation plant. Inspections of dwellings and premises are required by city ordinances.

GALVESTON, TEX.

In September, 1900, Galveston was visited by a severe tropical storm and a very large portion of the city was swept away. Immediately thereafter, its citizens began rebuilding the city. The entire Gulf front was protected by a sea-wall of concrete, a portion of which was constructed by the national government. Coincident with this improvement was the raising of the grade of the entire city. This grade raising, which at the present time is more than three quarters completed, was done by means of specially constructed dredges which took sand from the channel and brought it through a canal dug for the purpose, from where it was pumped out over the city, raising the grade from two to eight feet.

A sewerage system was also started, and is now practically completed in all parts of the city where the grade has been raised.

The water supply of Galveston is largely artesian, the well being located on the main land of Texas, and the water is conducted to the city by means of pipes.

A campaign against mosquitoes has been waged by the city health authorities with marked results.

In submitting the following report upon the sanitary work, including drainage, sewering, water supply, etc., completed, under way, or to be done in the City of New Orleans, Surgeon J. H. White stated that the information was based upon data given him by the city officials in addition to his own observations.

SEWERAGE, WATER SUPPLY AND DRAINAGE.

The three systems of sewerage, water supply and drainage are being or are to be constructed and operated by the Sewerage and Water Board of the city of New Orleans.

DRAINAGE SYSTEM.

The drainage system was started in 1896, and was sufficiently advanced by 1900 to begin operation and to provide for lowering the level of water in the main drainage arteries to a depth of from 10 to 15 feet below the surface where they used to stand nearly full of water at all times. The effect of this was to bring about a greatly reduced soil saturation, and coincident with it came a greatly decreased death rate. By 1902 nearly all of the drainage construction that available funds would permit had been completed, although $700,000 has since been spent in absolutely essential extensions and improvements in the drainage system, making the total expenditures upon said system to date about $5,400,000, of which $4,600,000 is from the Sewerage and Water Board funds. Nearly the whole city is now receiving the benefits of the drainage system to the extent that all existing canals, drains and gutters are kept pumped down practically continuously. Certain sections have not the canals which they are eventually in-

tended to have, and only a small portion of the sub-drainage leading into these canals has as yet been constructed. Further, the present pumping capacity is less than half of what it should be to keep ahead of the canal deliveries during occasional heavy storms, which, of course, results in the flooding of some of the low areas of the city until the pumps can get ahead of the rain fall. Besides this, it is intended eventually to construct an intercepting canal on Broad street that will be adequate to send the dry weather and small storm drainage flow to Lake Borgne, 14 miles below the city, only discharging the surplus water of heavy storms to Lake Ponchartrain, thus preventing its pollution.

Again, many large canals are already masonry lined, while some are still only excavated in earth. Eventually, all must be masonry lined and all streets must be sub-drained into them. To do all of this work now over the present city area of 25,000 acres would cost an amount beyond the possible consideration of the present population, though as the city grows in wealth and population it will be able to carry forward the works required to keep pace with this growth.

There is now authorized a further bond issue of $8,000,000, of which about $6,000,000 is to be expended in further improvements and extensions of the main drainage system, intercepting canal to Lake Borgne, a great increase in power and pumping capacity and the masonry lining of a number of canals in areas where the development already warrants this improvement. So soon as financial conditions will enable the Board to float this bond issue, this further work will be undertaken, and this expenditure will bring the main drainage system into very good condition. It will not entirely prevent flooding over sidewalks for short periods during unusually heavy showers, or shallow accumulations of water in low areas of the city when such storms occur, as that of last April, when over 8 inches of water fell in 12 hours, but it will give New Orleans a drainage system that will cope with any rain fall which would not give about equal trouble in practically any other large city.

SEWERAGE SYSTEM.

The sewerage construction was started in 1903. All of the main sewers and pumping stations are constructed and in operation, and about 250 miles of sewers are completed, the last 50 miles being not yet finally cleaned out and accepted from the contractors, but will be within a month or so. There still remain about 110 miles of sewers to build to cover the whole populated area of the city and sewer over 400 miles of streets. Bids were received for these sewers in September, to be completed by the end of 1908, but were all rejected because they were considered too high. This may delay slightly the completion of the last portion of the sewers, but in the mean time connections are being permitted, or soon will be permitted, to the entire 250 miles already constructed, and the remaining 110 miles will either be let to contract or be built independent of any contract as promptly as possible.

All of the constructed sewers are draining constantly to the pumping stations, and about 10,000,000 gallons per day of ground or seepage water is being pumped from them into the Mississippi River. This is having a very marked effect in further reducing the saturation of the soil.

The Board is not yet in a position to force sewerage connections, both because the water works system is not completed and because it is not in funds (until the $8,000,000 bond issue is floated) to make the connections from the sewer and water mains to the property line, which the law requires shall be done at the cost of the board. Many people, however, are making the sewer connections at their own expense, and about 700 connections are now in use and operating satisfactorily.

The total cost of the sewerage system, exclusive of house connections, will be about $5,500,000.

WATER WORKS SYSTEM.

About 160 miles of water mains are already laid, the water purification and pumping station work is all under contract and well advanced, contracts are now outstanding, or about to be signed up, for the completion of the water mains to bring the total mileage to about 450 miles, which will serve the present populated area of the city.

It is intended to furnish a clear filtered water that will be absolutely good and safe for all uses.

The water purification and pumping station contract will aggregate about $2,000,000, the pumping machinery contract about $500,000, and the distribution system. etc., about $4,200,000, or a total of about $6,700,000.

All contracts call for completion by or about the end of 1908, and there seems to be no reason why the work should not be ready for operation at about that time.

Work on the water works system was not started until 1905, because it was necessary to save interest on undelivered bonds and thus build up the construction fund through a period extending to the end of 1908, to be able to cover the ground at all with the sewerage and water works systems, and the latter being of a nature where expenditures could be made rapidly was left until there was barely time to complete it, in order to gain as much saving of interest as possible.

Figures above stated are closely approximate.

There is but little in the way of rules adopted as to drainage connections from houses, and this matter is only partly under the jurisdiction of the Sewerage and Water Board, since local subdrainage pipes are constructed by the city, on plans subject to the approval of the Sewerage and Water Board, and most drainage connections are into such pipe. Eventually a set of rules as to sewerage, water and drainage connections should be worked out and adopted jointly by the Sewerage and Water Board, the City Council and the City Board of Health. At present it is under Sewerage and Water Board rules, copy of which is sent herewith, and results are being watched with a view to perfecting and completing them (the rules) before asking for such joint action as will make them binding as to plumbing even before connections are made with the sewers, and as to drainage, whether the connection be into a street gutter, a sub-surface drain laid by the city, or into one of the drainage canals constructed by the Sewerage and Water Board.

PAVEMENT.

Some desultory pavement has been laid throughout the city, but no systematized or extensive work, and this is unfortunate because, for protection against yellow fever, not only are sewerage, drainage and water supply needed, but pavement as well, and the city cannot be considered in a position to relax her vigilance in the slightest degree until all of these have been put in.

Effort was made to secure from the City Engineer and the City Board of Health, any information obtainable with regard to this as well as the matter of mosquito elimination, but without success.

MOSQUITO DESTRUCTION.

It is gratifying to state that the present City Board of Health has carefully and consistently carried out the supervision of premises to see that the law providing for the screening of all water containers and the elimination of all pools and puddles is put into effect, and this law, which was put on the city's statute books at the instance of former City Health Officer Kohnke and myself, is a most complete and satisfactory ordinance.

This report would have been submitted much earlier but for the fact that I have waited more than a month in the hope that I might obtain from the City Engineer and the City Board of Health, the same definite and satisfactory data which were given me by the Sewerage and Water Board. In this, however, I was disappointed, and regarding the intention to pave the city, I can only say that I have been personally assured by the City Engineer that he is earnestly recommending the thorough paving of all the city as soon as the funds are available.

REPORT ON THE SANITARY IMPROVEMENTS OF THE CITY OF MOBILE, AND THE NEW SANITARY LAW OF THE STATE OF ALABAMA. PRESENTED BY DR. RHETT GOODE, DELEGATE FROM THE UNITED STATES.

In compliance with a suggestion from Surgeon General Wyman, Chairman, and in accordance with your provisional program, I have concluded to make a brief

report under the first section (b), that is, "A report on the condition of the port of Mobile, mentioning the works which have been executed and those in course of construction. Also a brief history of the water supply, sewerage, plumbing and house drainage."

Under paragraph (d) I shall submit in full a report of the sanitary police laws which have been issued by the State of Alabama and the City of Mobile, since the fourteenth of October, 1905.

The city of Mobile is situated at the mouth of Mobile River where it empties into Mobile Bay, principally on the west side, and thirty-three miles from the Gulf of Mexico. It has a population of over 50,000 and covers an area of seventeen square miles. The average rise of the tide water is two feet two inches. The surface of the ground is nearly level for some distance from the water and then gradually rises to a height of some two hundred feet at a point six miles west of the water front. In a direction north, at a distance of two miles we have an abrupt rise of over fifty feet.

There has been a complete system of water works constructed which gives to the citizens a bountiful supply of pure water which has been analyzed by the Bureau of Public Health at Washington, D. C., and found to be free of disease germs. This water supply is obtained from clear running creeks located a distance between eight and ten miles from the center of the city. They have impounding reservoirs and large pumps which supply the city daily with over nine million gallons of water for consumption. There are at the present time 10,383 houses supplied with the water for use. There is a total mileage of water mains amounting to 154 and 5-8 miles. There is no water used in the limits of the city obtained from cisterns or wells.

A complete system of sewerage which covers seven-eighths of the entire city has been constructed and in operation for the past eight years. This sewerage system extends from the eastern to the western limits of the city and empties into the river at a point below the low tide water mark and is by the current of the river carried out into the bay and thence to the Gulf of Mexico.

The house drains and closets are connected with this general sewerage system. Municipal laws have been passed covering the management of the water supply, the sanitary sewerage and sanitary plumbing of the residences of the city, all of which are submitted as a part of this report. The soil of the City of Mobile is sandy and very porous. After the very severest rains it requires only a short period, two or three days, for the streets of the city to become perfectly dry.

At the present time we have 14 miles of paved streets, composed of asphalt, bitulithic, brick, belgium and wooden blocks. Five miles are under contract for completion. Where the streets have been paved, the storm water from the roofs of houses and the surface of yards and sidewalks, are disposed of through the storm sewers which are constructed in connection with the paving. At the points where the city is not paved, this water is allowed to pass off through the open street gutters natural drainage.

I submit a copy of an ordinance to regulate the sale of milk in the City of Mobile. This ordinance has been in execution for more than a year and we have found that it has been of great service in securing to the people a pure and better supply of milk.

The milk inspector in examining the herds of the different dairymen of the city found a large number of cows affected with tuberculosis. These have been eliminated and the system is working to the greatest satisfaction.

I also submit an ordinance passed by the city relative to the destruction of mosquitoes and declaring standing water a nuisance.

MOSQUITOES.

Ordinance adopted:

Section 1. *Pools and sinks to be oiled.*—Between March first and November thirtieth, in each year, the owner or occupier of every house, or lot within the City of Mobile, shall at least once a month, put into every pool, or sink which is open, or in which there is any opening or outlet, kerosene oil, at the rate of one ounce for each fifteen square feet of surface of such pool or sink, and that quantity for any surface less than fifteen feet.

Section 2. *Rain barrels, water in to be oiled.*—One-half of an ounce of kerosene oil shall, during the same period of time, be put by such owner, or tenant,

into every open barrel, or hogshead, kept for the purpose of collecting rain water, and water shall be taken from such barrel, or hogshead, only by a spigot of wood, or metal, placed as near as convenient to the bottom of the barrel or hogshead.

Section 3. *Street Superintendent to oil ditches, etc.*—The Superintendent of streets shall, during the same period of time, put crude petroleum oil on all stagnant water within the limits of the City of Mobile, in battery ditches, cisterns, drains and gutters, located upon the streets or upon property owned by the city, at the expense of the city, at the rate of two ounces to every fifteen square feet of surface, once every two weeks.

Section 4. *Police to enforce ordinance; penalty for failure to comply with ordinance.*—It is the duty of the police, by proper inspection, to see that the provisions of this ordinance are complied with, and every person failing or refusing to comply with its provisions shall be fined by the Recorder not less than five dollars nor more than twenty dollars for each offense.

NUISANCES.

Permitting water to stand in tub, or other receptacle on premises, for more than twenty-four hours, penalty for.— No person, owning or occupying, or being in possession of any house, shed or other building, or lot of land, in the city of Mobile, shall permit or allow water to stand in any tub, bucket, can, bottle or other receptacle whatever in such houses, shed or other building, or upon such lot of land, for a period of time exceeding twenty-four hours. Any violation of this section shall be punished by a fine, to be imposed by the Recorder, of not less than two dollars and fifty cents, nor more than fifty dollars for such offense.

Pond or standing water on premises, is nuisance, abatement of.—Upon complaint being made before the Recorder by the Health Officer that a pond, or other standing water remains upon the land or lot of any citizen, corporation or association within the corporate limits of the City of Mobile, and that the same is dangerous to the health of the people of said city, and a nuisance, the Recorder shall cause a warrant to be issued commanding said person, corporation or association, to appear before him to answer said complaint. And the Recorder shall hear the evidence in the case, and, if satisfied that said complaint is well founded, order and require said nuisance to be abated within a period of time, not exceeding twenty days.

The present Legislature of the State of Alabama has enacted the following health laws:

1. An act to reconstruct the law regulating the practice of medicine in this State.
2. An act increasing the annual appropriation to the State Board of Health.
3. An act providing for the establishment of a Tuberculosis Sanatorium.
4. An act amending the general public health laws in the following particulars:

(a) Requiring the following named diseases to be reported to health officials, local and State: Leprosy, cholera, typhus fever, cerebro-spinal meningitis, yellow fever, scarlet fever, bubonic plague, hydrophobia, glanders, small-pox, diphtheria, pulmonary tuberculosis, typhoid fever, Chagris fever, beri-beri.

(b) Providing more fully than heretofore for the collection of vital and mortuary statistics.

(c) Defining more fully than heretofore the duties of county health officers.

(d) Providing an increase of salaries for county health officers.

(e) Prescribing the duties of municipal health officers and providing that their salaries shall be fixed by the respective municipalities.

(f) Providing better than heretofore for the disinfection of infected houses.

(g) Prohibiting the leasing or selling of a house infected with any of the diseases named above under (a) without giving notice of such infection to the proposed lessee or purchaser.

(h) Requiring judges of probate to report all marriages to the State Board of Health.

(i) Requiring clerks and registers of equity courts to report all divorces to the State Board of Health.

(j) Increasing the appropriation for State quarantine purposes.

A bill is now pending, with every prospect of becoming a law, providing for the establishment of an "Epileptic Colony."

The above comprises all legislation in reference to public health matters enacted within the past two years, except such as resulted in transferring the maritime quarantine to the control of the United States Public Health and Marine Hospital Service.

REPORT OF DR. SAMUEL G. DIXON, COMMISSIONER OF HEALTH OF THE COMMONWEALTH OF PENNSYLVANIA, DELEGATE FOR THE UNITED STATES OF AMERICA.

Mr. President and Gentlemen:

On the occasion of the Second International Convention of the American Republics held in the City of Washington, in October, 1905, Dr. John S. Fulton, Secretary of the State Board of Health of Maryland, in his report as delegate for the United States, in a concise and admirable statement of the different modes of organization for sanitary administration prevailing among the governmental units under our system mentioned the fact that Pennsylvania had just made a complete change in her plan of organization, and that it was then too early to judge of the effects of the change. The writer is fortunately in a position not only to present to the Convention the details of the new system but furnish approximate results of its application from which the delegates may be able to determine whether the move was not a wise one.

For twenty years the sanitary affairs of the State had been administered by a Board of Health, whose members resided at widely scattered points throughout her limits. This Board elected a Secretary who was its Executive Officer and therefore the Chief Sanitary Officer of the Commonwealth. His powers were circumscribed, and in addition to this, the pecuniary means appropriated to the Board by the legislature were extremely limited. Under these circumstances the Board confined itself to a considerable extent to missionary work, interfering little with general insanitary conditions except in case of great epidemics or unusual catastrophes, when it managed to obtain a larger appropriation under stress of fear. The change that was made consisted in the passage of an entirely new law, which abrogated the old Board and established in its place a Department having an equal standing in the Government with other long-established departments such as that of State or of the Treasury. This law, with other related documents, will be found in the full report in the appendix. This Department consisted of two factors, the Commissioner of Health, who was made the complete repository of power, and an Advisory Board composed of six physicians of high attainment, and a Civil Engineer, which the Commissioner would call upon for purposes of consultation at his convenience, and to which was assigned the duty of drawing up general regulations for the proper performance of the Department. The immense advantage of promptness of action in such emergencies as are constantly occurring in the experience of health officers, instead of waiting on the action of a considerable body of widely separated individuals, needs no demonstration. A greatly increased appropriation afforded the Commissioner the means for putting into force such reforms as he at once saw to be necessary in order to place the health affairs of the State upon at least as high a plane as those of any other State. At the same time the legislature enacted a law providing for the immediate registration of births and deaths, a matter shamefully neglected up to that time, and placed this system under the general supervision of the Commissioner of Health.

Under the lax legislation for the prevention of the pollution of public waters previously prevailing, all of the streams of the State, most of which were utilized as sources of drinking water, were becoming terribly and disgustingly contaminated. The new legislation placed this whole matter in the hands of the Commissioner associated in his final decisions with the Governor and the Attorney-General of the State. Thus it will be seen that in this one official was concentrated all the internal sanitary authority of the State. The authority in external affairs, the administration of seaboard quarantine, was still left in the hands of the State Quarantine Board hereafter to be described, but of that Board he was also made a member.

In addition to the general grant of authority "to determine the most efficient and practical means for the prevention and suppression of disease" the following are among powers specifically accorded him.

To determine what assistants it is necessary to employ and to make all appointments.

To purchase all supplies and materials necessary for carrying on the work of his Department.

To issue subpoenas to secure the attendance of witnesses and compel them to testify.

To issue warrants to any sheriff, constable, or policeman to apprehend and arrest such personas as disobey the quarantine orders or regulations of the Department. This warrant must be executed forthwith and return of the execution must be duly made to the Comimssioner.

To either personally or by his agents, without fee or hindrance, enter, examine and survey all grounds, vehicles, apartments, buildings and places suspected of containing nuisances affecting the security of life and health, and to confer the authority of constables on his agents for such purposes.

To order nuisances to be abated and removed and to enforce quarantine regulations.

To have the general supervision of the State registration of births, marriages, deaths and diseases; of practitioners of medicine and surgery, of midwives, nurses and undertakers.

Any violation of the Department's orders issued by the Commissioner constitutes a misdemeanor and is punishable by fine or imprisonment or both. Such were the powers conferred.

Let us consider for a moment the task which confronted the new Department.

While all large cities and boroughs and many of the smaller boroughs (incorporated villages) already possessed Boards of Health of their own, few of these boards were maintaining a system more or less efficient of registration of vital statistics. Moreover, all the vast rural and mountainous regions of the State were without Boards of Health or systems of registration, not even requiring certificates for the burial of the dead; so that a human being could be put under the ground with as little legal record as a dog. What this means will be understood when it is said that Pennsylvania has a population of seven million people with an area of forty-five thousand square miles and contains 30 cities, 849 boroughs, 67 counties and 1,547 townships—a total of 2,426 separate and distinct municipalities which must be considered individually in all public health work. The total population estimated for 1906 is 6,884,388, of which 4,447,586 are included within the limits of incorporated cities and boroughs, and 2,436,802 reside in rural districts. In at least 400 boroughs, or about 50 per cent, either no Board of Health heretofore existed, or one had existed in name only. In 1,547 townships absolutely no permanent health organization had been provided for, so that at the date of the creation of the Department of Health at least one-half of the people in our State, or about three and one-half millions, were without any permanent local protection to life or health. To properly safeguard these people and provide for their protection was one of the first efforts of the Department of Health, and in order that this might be done more effectually, the Department keeps in close touch and co-operates with all the municipalities which have Boards of Health of their own.

As regards the pollution of streams the conditions which confronted us were almost indescribable; the individual householder constructing an overhanging privy and polluting the small stream that finds its way past his property; the small town defiling with raw sewage a stream of water that is expected to quench the thirst of villagers not far away; the large municipalities discharging the contents of their large sewers into the river that is the water supply for thousands and thousands of human beings further down the stream. As this has been going on for generations, it need not be said that it is not the work of a day or a year to stop it; but stop it we must, and in this great work already public sentiment is coming to our aid. The people are beginning to appreciate, however, that a sanitary method of sewage disposal is not costly compared with the money outlay that typhoid fever demands in our State every year, not to speak of the awful harvest of misery, suffering, and death that it reaps.

The laws for the suppression of contagious diseases were very imperfectly enforced and smallpox, diphtheria and scarlet fever and other communicable diseases were lamentably rife, and the central authority was without means of obtaining early information of the existence of such affections, so that steps might be taken to prevent epidemics.

No provision existed by which the modern facilities for the bacterial diagnosis of disease could be extended to physicians outside of the large cities.

The State was taking no commensurate part in the great campaign being waged against the great enemy of the human race, tuberculosis.

All of these conditions demanded immediate attention. In order to establish such a registration system as the law contemplated it was necessary to select men throughout the State of sufficient education and standing to collect these statistics. Such officials under the title of Local Registrars are now established in every nook and corner of the State to the number of 972, each with a deputy, and in addition, 214 sub-registrars. Within six months from the establishment of the Department the system was ready to be inaugurated, and before the year had half elapsed showed such complete and accurate results that the Census Bureau of the National Government did not hesitate to admit Pennsylvania to the number of registration States.

In making this announcement the Director of the Census said: "I cordially congratulate you upon the great work you have done in organizing the registration system of Pennsylvania, and I am highly gratified that it is possible at this early date to increase the registration area by the addition of so important a commonwealth."

When it is considered that Pennsylvania has never heretofore been recognized in the United States Census reports and that during the period of thirty years covered by these reports that but ten States have been so recognized, the result achieved in the initial year of our work in this respect may be considered as witnessing to the efficiency of our system which it may be said is in closest harmony with that of the Federal Government.

In the year 1906 the number of births reported was 172,000. The number of deaths was 123,195. These have been registered, indexed, filed and bound for reference.

In order to supply the lack of sanitary authorities in the townships or rural communities, in addition to urging the smaller municipalities to accept their legal duty of establishing Boards of Health, 750 Health Officers have been appointed. These men are responsible solely to the State Commissioner of Health. In this way has been organized a State Sanitary constabulary which, having no favors to ask from the people or the local authorities, will be loyal to the State and will not hesitate to do its full duty.

I would like to refer briefly to their part in controlling the spread of communicable disease. These township Health Officers in each county work under the supervision of our County Medical Inspector, who personally investigates all epidemics in the rural districts and also in the boroughs and cities when conditions in these municipalities get beyond the control of the local health boards.

The physicians of the State, and we have, I believe, about eleven thousand in Pennsylvania, report each case of communicable disease occurring in their practice in the townships to our Department's health officer in that township. Immediately upon the receipt of this notice the health officer placards the premises, establishes the necessary quarantine, furnishes the householder with a Department circular setting forth the rules to observe to control the spread of the disease and gives the proper notice of the case to the school authorities and to the local public library. By reason of the fact that the State is so completely covered by our health officers, the least time possible elapses between the report of the case by the physician and the inauguration of the Department's precautionary measures, and I cannot refrain right here from acknowledging the support which the medical practitioners of Pennsylvania are giving the Department by the prompt reporting of cases, making it seldom necessary for us to ask the Court to compel the enforcement of the law. Upon notice of the physician or County Medical Inspector the health officer removes placards, raises quarantine and thoroughly disinfects the premises in the manner described in the Health Officers' Manual.

The township health officer re-mails daily to the central office of the State Department of Health the physician's report of every case of communicable disease. In cities and boroughs such cases are reported by the physician to the Secretary of the local Board of Health, who in return sends a weekly report to the State Department of Health. Thus the Commissioner is in the closest possible touch with the health conditions prevailing in every community throughout the State. It was through these reports of communicable disease that the

new Department, shortly after its inauguration, discovered that diphtheria was prevalent to an extent heretofore unsuspected throughout the State. The possibility of lessening the alarming mortality from this disease so destructive to child life, by the use of antitoxic serum, naturally suggested itself and we therefore established depots for the free distribution of that agent to the poor through their physicians. For this purpose there are over 500 distributing centers, of which the following is the record to March 1, 1907:

Date of inauguration	November 4,1905.
Present number of stations	511
Number of cases treated	4,635
Number of deaths	445
Percentage	9 6/10
Number immunized	2,813
Number contracting the disease after being immunized, all of whom recovered	73
Number of packages of 1,000 units dispensed up to the present time	4,317
Number of packages of 3,000 units dispensed up to the present time	7,936

As the number of these cases which would have been able to procure the antitoxin treatment, but for the wise intervention of the State, would have been very small, it is only fair to compare the results obtained with those which prevailed before the introduction of antitoxin.

Allowing 40 per cent as the mortality rate, that being the rate in New York in 1892, there should have been 1,854 deaths among the 4,635 cases treated. The actual number was 445, or 9-6/10 per cent. Hence there was a direct saving of 1,409 lives in the brief space of sixteen months.

This successful result was in part due to the fact that no region in the State, however remote, was left without a convenient distributing center, and in this way an opportunity for the early administration of the remedy was afforded; and secondly, that with each package was contained a memorandum for the physician urging the importance of extreme promptness in its employment and in large doses.

In the matter of the purification of streams and water supplies the law forbids the introduction of any new system of water supply or sewerage or the extension of any present system without a permit from the Commissioner of Health. It also requires plans of all such systems to be filed in the Department of Health. It will readily be understood that this provision requires a large engineering corps both for office and for field work. Working in harmony with the Department of Medical Inspection much work has been done in this division in the suppression of epidemics of typhoid fever.

In the neighborhood of two hundred applications for approval of plans of water works and sewers have been considered, and permits have been issued for the installation of new works, for the extension of old works and for the obtaining of new supplies of water under such conditions and stipulations as shall assure the construction of proper works in the first instance and the efficient operation and maintenance of them thereafter.

It is useless to require corporations either public or private to assume large expenditures for the erection of works to purify sewage and not also maintain supervision over the operation, because experience the world over has proven, in such matters, that the local officers either become negligent or purposely, in order to avoid expense, resort to lax methods of operation. This has been peculiarly the fact relative to municipal works. The public policy which admits State approval of the plans also dictates that State supervision of the operation shall obtain.

Still further as a protective measure, it has been necessary, in answer to numerous petitions and complaints, to place in the field some two score of special inspectors, in addition to our township health officers, to investigate all occupied estates on rural water sheds of average size, and to bring about a proper disposal of sewage and waste matters on such estates. All told, in the neighborhood of ten thousand properties have been thus inspected and abatements effected wherever menaces to health existed.

So much for the plan of organization of the Department which now has nearly 3,000 men on its working staff. The keynote of this organization is centralization of authority, avoiding divided counsels and insuring promptness and efficiency of action, essential factors in a successful administration.

Probably no better test as to its success can be adduced than the action of the last biennial session of the State legislature.

That body set the seal of its approbation upon the work already accomplished by the new Department by increasing its appropriation from the already unheard-of sum of $300,000 to $1,000,000 for its routine work, and an additional $1,000,000 for the campaign against tuberculosis. Of this latter amount $600,000 is to be devoted to the founding in the Forest Reservations of the State of sanatoria for the consumptive poor, and $400,000 to the establishment of dispensaries for the same class of sufferers.

The scheme for the sanatoria which we have adopted in Pennsylvania is a comprehensive one. We are utilizing the great forest reservations of the State for the purpose of hospital or sanatorium treatment. It is proposed to have two colonies at widely separate points that they may be accessible from different parts of the State. One of these has already been started and is caring for a large number of patients. Instead of massive structures of brick or stone we are erecting a large number of frame cottages, each of which will accommodate eight patients. These cottages of four rooms each are being situated in relation to the points of the compass so as to secure the maximum amount of sunlight during every day of the year. There are no porches to keep out the sun's rays from the rooms of the cottages. Instead, we are building an adequate number of sun pavilions.

Somewhat apart from these there will be an infirmary for those in the more advanced stages of the disease. In this building those to whom we cannot hold out hopes of recovery will be afforded shelter and the comforts of a home in the closing days of life; and the extension of relief to these helpless sufferers will be more than justified in the fact that we are removing them from their confined, crowded, ill-ventilated and impoverished homes at the time when they would be most in danger of communicating the disease to other members of the family and the greatest menace to the public.

After recovery the male patients will be afforded opportunities for work in forestry for which they will be entitled to their board and clothing, for a sufficient time to test their strength and the reality of the cure. Men whose previous occupations have been such as to create a great deal of dust, such as saw sharpeners and stone cutters, will be urged to seek permanent work of a less objectionable nature. And those of both sexes will be counselled to as far as possible find opportunities for work in the country, and the force of the Department scattered over the entire State will be used to help to find healthful employment for those who have recovered sufficiently to be dismissed from the care of the State.

We are establishing also, in each of sixty-seven counties of the State, a Dispensary for tuberculosis under the direct supervision of the Department. The object of these dispensaries is two-fold. First, many cases unable to leave their homes for a prolonged stay in a sanatorium come here frequently for advice in regard to matters of diet, medication when needed, and the open air treatment as far as this is possible at home. Secondly, they receive careful instruction in all the precautions necessary to be observed for the protection of others. Their compliance with these instructions is an essential to their continuing to receive State treatment. In fact "the dissemination of knowledge relating to the prevention and cure of tuberculosis and for the study of social and occupational conditions that predispose to its development" is expressly noted in the act creating the system as one of its important objects.

The Sanatoria and Dispensaries are being pushed to completion as rapidly as possible, and are destined not only to prove a bulwark against the spread of that devastating plague, but an opportunity for scientific investigation which may lead to its entire extermination.

For this latter purpose the magnificent laboratories placed at the disposal of the Department by the University of Pennsylvania in the City of Philadelphia will be made use of, and the experiments already so successfully conducted on the subject of immunity against tuberculosis in the inferior animal will be prosecuted with increased vigor in the confident hope that success in this direction may also be attained in the human being.

In connection with this brief statement as to the methods which we propose to adopt in our own State for banishing this plague it will be appropriate here to introduce as requested a suggestion of practical means to prevent persons suffering from tuberculosis from transmitting the disease to the healthy persons who may be travelling in their company either in trains or vessels.

In order to accomplish this object satisfactorily it would be necessary for transportation companies to furnish separate apartments for those suffering from that disease and either to furnish them with wooden dishes and eating utensils which could at once be burned, or submit all eating utensils to boiling or high steam pressure. Neither of these suggestions are practicable at the present time at least.

We must consider such persons as travelling in the ordinary day coach or sleeping car and taking their meals in either dining cars, buffet cars or station restaurants.

Practically the same conditions would obtain when travelling by water.

The first essential is that the clothing and contents of the pockets, including, of course, the tickets and checks, be kept free from contamination. To this end the patients should carry sputum cups and should expectorate only in them—not in their pocket handkerchiefs. The secretions of the nose should be received on small pieces of cheap fabric to be used only once. These should be placed at once in a rubber lined bag and be burned as often as opportunity occurs.

Such persons should never place their money or their tickets in their mouths.

They should not smoke pipes or use cigar holders. Cigar or cigarette stumps should be placed in the rubber lined bags with the discarded nasal cloths. They should carry their own soap and should never rinse their mouths or brush their teeth in the basin of the lavatory. They should use only their own hair brushes and combs and after washing should see that the basin they have used is thoroughly scalded.

Men should keep their lips and chins closely shaven. Patients should not permit their clothing to be brushed except in the open air.

In conclusion, Mr. President and fellow delegates, since, as one of the United States' representatives, I have been honored with the opportunity of telling you what my own Commonwealth of Pennsylvania is doing in the battle against disease, I pledge you for that State and her sister States, hearty co-operation in every movement that aims toward the betterment of health conditions on our two great Western Continents.

We are all working toward the same goal. Ours is a glorious mission; to war against diseases that are preventable; to educate the great masses, so that they themselves shall become vigorous recruits in the ranks of the Sanitarian; to relieve misery and suffering; to help our fellow man.

What greater ambition could we have!

REPORT ON THE QUARANTINE IN NEW YORK, PRESENTED BY DR. A. H. DOTY, HEALTH OFFICER OF THE PORT OF NEW YORK AND DELEGATE FROM THE UNITED STATES.

The Quarantine Establishment at the port of New York has from time to time been enlarged and its equipment improved to comply with modern sanitation. At present it consists of the following:

An administration and boarding station, situated on the Staten Island coast at the entrance of the New York Bay, about seven miles from the city of New York. This station consists of the administration building, laboratory, residences of medical officers, etc., and docks and boats used in the Quarantine Service. There are four steam vessels for this purpose, one of which is a portable disinfecting plant.

At this station are inspected all incoming foreign vessels, and at certain seasons of the year some domestic ones.

Transfers of patients and persons held for observation take place at this station.

In the Lower Bay, about two and three miles respectively from the boarding station, and over a mile from the mainland are two islands constructed on a sand bar for quarantine purposes. The upper one comprising about thirteen acres is known as Hoffman Island. This island is for the detention of persons who have presumably been exposed to infectious diseases. The buildings consist

of large dormitories situated at the upper end of the island for the reception of third, or steerage passengers, and second cabin passengers, and at the lower end of the island are buildings for the accommodation of saloon or first cabin passengers. Over 2,000 persons can be cared for at this place. This island also contains a large disinfecting plant, consisting of three modern steam chambers, 20 feet long by 5 feet in diameter, one of which has been so constructed that it may be used for formaldehyde disinfection.

Swinburne Island is about one mile below Hoffman Island and is much smaller in area and is for the care and treatment of infectious disease. This island is being practically rebuillt. Six new brick and cement one-story hospital pavilions, with every modern equipment and with accommodation for over one hundred patients are in process of construction, and are substituted for the wooden hospital buildings which previously existed. Both islands have a corps of assistants and every provision is made for any emergency.

The yearly work of the Department may be illustrated by extracts from the report of 1906, which are as follows:

Number of foreign vessels inspected	4,493
Number of domestic vessels inspected	1,654
Number of persons inspected on incoming vessels	1,033,962
Number of persons held for detention	4,570
Number of cases of disease removed	134
Number of steam disinfections	232
Number of formaldehyde and sulphur dioxide disinfections	1,041

In connection with the regular work of this Department, considerable investigation has been made in regard to the mosquito and its extermination. This investigation has been continued over a period of six years, and among other interesting results obtained it has been shown that seventy-five or eighty per cent of the mosquitoes which are found along the the Atlantic coast, and in and about New York consists of the "culex sollicitans," "strip-legged," or "Atlantic" coast mosquito, and that this variety does not breed inland but only in salt water marshes along the coast, and that the only means of exterminating this variety is the proper draining of the said land.

An appropriation was made by the City of New York in October, 1905, for the purpose of draining the salt swampy land along the coast of Staten Island which is one of the boroughs of New York City, and the work was begun in the following month, November, 1905, and is now nearing completion. Already over 400 miles of ditches have been dug, and about 20 square miles of swamp land have been drained. The ditches are about ten inches wide and about two feet deep, and from 50 to 250 feet or more apart, depending on the character of the land. These ditches empty into the sea at different parts of the coast.

The results have been eminently successful and in sections where the drainage has been completed, the mosquito has practically disappeared. The breeding places which cover vast areas can only be successfully dealt with by federal, state or municipal control as individual work would manifestly be of no value. Some photographs of this work accompany this report and will show the swamp land above referred to before and after drainage.

REMARKS OF H. L. E. JOHNSON, M.D., WASHINGTON, D. C., A DELEGATE FROM THE UNITED STATES.

The Port of Washington, D. C., is situated on and between the Potomac River, and its Eastern Branch, the Anacostia, 110 miles from its mouth, the Chesapeake Bay. It is a tide water river, fresh at Washington, brackish and salt, 30 miles below. For many years malaria (Anopheles) fever has been prevalent in consequence of the extensive mosquito-breeding flats and marsh lands along and within the water courses, which are largely bare at low tide, abundant in rank vegetation and upon which sewage is alternately deposited and exposed with each tide. To correct these insanitary conditions and increase the harbor capacity, extensive engineering work has been, and is, in progress. Heavy sea walls are being constructed, navigation and water currents improved by dredging the channels to a depth of 24 feet at low tide, flats and swamp lands are being filled up, drained, raised many feet above the high water mark, and converted into public parks. Strict police health regulations have been adopted,

prohibiting contamination of the water courses, from ship or shore, by the introduction of vegetable waste, dead animals, or other refuse matter.

SEWER SYSTEM.

A new system of sewers has been projected which will free the harbor from sewage contamination. This system of sewage disposal is based upon the discharge of sewage from a population of 500,000, and consists of a pumping station connected with trunk and section sewers, which is finally to discharge about three miles below the harbor at the bottom of the Potomac River where the flow and volume of water are sufficient to dilute all such sewage discharge and render it inoffensive. The problem of disposal of surface or drainage water, and the construction of suburban sewers to meet the demands of growing outlying settlements is being estimated and provided for by the U. S. Engineers, within the annual appropriations by Congress. Eventually every building in the District of Columbia will have sewer and water connection.

PUBLIC CONVENIENCE STATIONS AND PUBLIC BATHS.

Two public convenience stations of modern design and construction have been completed in the business section of the city and a public bath, with floating and stationary bath houses is being perfected on the river front.

WATER SUPPLY AND FILTRATION.

The water supply is obtained from the Potomac River at the Great Falls, about 18 miles above the port, and was formerly clarified by sedimentation only. Since October, 1905, the filtration plant, of the slow sand type, which many of you inspected when attending the second International Sanitary Convention, has been completed and is supplying the entire system with clean and healthful water.

SHALLOW WELLS.

Shallow wells for potable water are kept under careful observation and when found contaminated, are condemned by the authorities and destroyed. Many have recently been condemned and destroyed and it will not be a great while before shallow wells in Washington will be a relic of the past.

INSANITARY BUILDINGS AND BACK YARDS.

The Act of May 7, 1906, provides for the enforcement of sanitation of buildings, when necessary, evacuation or demolition, after condemnation by a board created for that purpose. Criminal prosecution is provided for failure to comply with the provisions of the statute. Many shacks and other buildings coming within the scope of the law have been condemned and demolished, though in many cases the insanitary conditions have been removed by the occupants or owners, thus relieving the application of drastic measures. The Commissioners of the District have promulgated a regulation supplemental to the above, requiring all basements, cellars, back yards and private alleys to be kept clean, dry and free from filth accumulation. Inspections are made, and violations punished by fine.

CONTAGIOUS DISEASES REPORTED.

By amendment to the law requiring the reporting of contagious diseases to the Health Office, chickenpox, measles, whooping cough, typhoid fever and epidemic cerebro-spinal meningitis, are now included in that class.

INSPECTION OF DISTRICT GOVERNMENT BUILDINGS AND EMPLOYEES.

The Commissioners have promulgated a regulation directing the Health Officer to inspect, at regular intervals, all District Government buildings for the purpose of removing all sources of tubercular infection, if existing, and to inspect and control all employees infected with tuberculosis. Anti-spitting cards are prominently posted.

INSPECTION OF U. S. PUBLIC BUILDINGS.

The President has appointed a special commission to inspect all U. S. buildings and make regulations controlling tuberculous cases and insanitary conditions. The Commission consists of the Surgeons General of the Army, Navy and U. S. Public Health and Marine Hospital Service.

Amendments to an ordinance to prevent the sale of unwholesome food and regulate the sale of drugs in the cities of Washington and Georgetown, were approved by the Commissioners, in 1907.

Every manager of a store, market, café, lunch-room, or any other place where a food or a beverage is manufactured or prepared for sale, stored for sale, or sold, which store, café, lunch-room, or other place is in operation at the time of the promulgation of this regulation, shall, on or before July 1, 1907, register his full name, and the location of said store, market, café, lunch-room, or other place, and the nature of the business transacted, in a book to be kept in the Health Office for that purpose; and every manager of a store, market, café, lunch-room, or other place where a food or beverage is manufactured, or prepared for sale, stored for sale, offered for sale, or sold, that is first opened for business after the promulgation of this regulation shall, within five days after the opening of said store, market, café, lunch-room, or other place, register in like manner. In the event of a change in the management or in the location of any store, market, café, lunch-room, or other place aforesaid, the manager thereof shall call at the Health Office within five days after such change takes place and make a corresponding entry. Any person who violates the provisions of this regulation shall, upon conviction thereof, be punished by a fine not exceeding twenty-five dollars for each and every such offence.

No person shall expose for sale, on any public highway or in any open market, stand or stall in the District of Columbia, candy, cake, or bread, dates or figs, or any other food of a kind not ordinarily cooked, peeled, or washed before being eaten, unless such candy, cake, bread, dates, figs or other article of food is effectually wrapped, or covered and enclosed, so as to protect it from dust and insects.

No person selling candy, cake, bread, dates, figs, butter, or other article of food of a kind not ordinarily cooked, peeled or washed before being eaten, shall wrap or cover the same with newspaper or with any other paper previously used for any other purpose.

No person shall expose any article of food for sale, on any public highway in the District of Columbia, within twenty-four inches from the surface of the ground, unless said article of food is covered or so closed as to prevent access of dogs, or is constantly in the immediate presence of the owner of such article of food or the proper representative of such owner having custody thereof.

No vendor or distributor of foods or beverages for immediate consumption on or about the place of business of such vendor or distributor shall permit any cup, glass, spoon, or fork that has been used for, or in connection with the consumption of any such food or beverage, to be used again for the same purpose until after it has been thoroughly washed in clean water. Any person violating any of these provisions shall be punished by a fine of not less than one dollar, or more than twenty-five dollars, for every violation.

Every manager of a store, market, dairy, café, lunch-room or of any other place in the District where a food or a beverage or confectionery, or any similar article is manufactured or prepared for sale, stored for sale, offered for sale, or sold, shall cause it to be screened effectually so as to prevent flies and other insects from obtaining access to such food, etc., and keep it free from flies and other insects at all times. Any person violating the provisions of this regulation shall upon conviction, be fined not more than twenty-five dollars for each and every such offence.

He shall equip such store, etc., with running water or other proper water supply, if running water be not available, and with facilities and material for the proper washing, and shall cause such washing to be done of the hands of all persons employed therein, and for the proper cleaning of said store, etc., and of utensils, apparatus and materials used in connection therewith. Persons violating the provisions of this regulation shall, upon conviction thereof, be punished by a fine of not more than $25 for each and every such offence.

SUGGESTIONS FOR THE PREVENTION OF THE TRANSMISSION OF TUBERCULOSIS TO HEALTHY PERSONS TRAVELING ON TRAINS, SHIPS OR ELSEWHERE.

Tuberculous subjects should not be employed on cars or ships in any capacity which brings them in direct contact with persons not so affected, nor should they be permitted to handle or come in contact with the food, water, or beverage supply.

No person so affected should be employed as porter, or in any capacity in a dining car, ship, saloon or kitchen. Tuberculous patients and the general public should be minutely instructed concerning the cause, transmission, early symptoms, disinfection of sputum, danger of contact either through drinking and eating utensils, or otherwise, and the absolute necessity of co-operation in enforcing the recognized hygienic methods for preventing the spread of the disease.

Transportation companies should be required to furnish separate cars, sections, or other isolated spaces for persons known to be tuberculous. Particularly is this precaution essentially on the lines which convey tuberculous persons to the various "cure localities" and continuing onward as through lines, sell to new passengers without the slightest disinfection, the state rooms or berths vacated by the infected passengers. Specific instances of this neglect, have repeatedly come under my personal observation.

Disinfection should be absolute as to cars, ships, eating and drinking utensils, napkins, bedding, towels, carpets, draperies, cuspidors, sputum and wash basin drains. The latter should be flushed and freed from accumulation by the use of superheated steam at high pressure. The slow discharge from Pullman wash-basins resulting from obstructive accumulations is familiar to almost every passenger, but is not surprising when one witnesses each morning the use of the basins for spitting and teeth cleaning purposes. Anti-spitting and a special waste sink in the wash room for such use would be a decided hygienic improvement.

I suggest as a precautionary and preventive measure, that persons presumably healthy, should voluntarily and as a routine health matter, have a thorough examination made at stated intervals to determine the presence or absence of tubercular infection. I believe that a large percentage of the grave or fatal cases of tuberculosis could be cured if diagnosticated and treated at the earliest determinable stage of the disease. Unrecognized, mild and incipient cases of tuberculosis, are causative of a greater zone of infection than are advanced cases which are under modern treatment and control.

INFORMATION REGARDING MALARIA. PRESENTED IN ACCORDANCE WITH PROVISIONAL PROGRAM, BY SURGEON-GENERAL WALTER WYMAN, U. S. PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

Malaria, though widely distributed throughout the United States, is absent in certain areas and exceedingly rare in others. Its exact geographical distribution has as yet not been determined. Such a study involves an exact determination of the distribution of the anopheles mosquito, and this subject is now receiving the attention of Prof. L. O. Howard, Chief of the Bureau of Entomology, Department of Agriculture, and Consulting Entomologist of the United States Public Health and Marine Hospital Service.

The disease prevails along the coast of New Jersey, Maryland, the Carolinas, and in large areas of the Gulf States. It is also prevalent in certain districts of the Mississippi Valley. It has a limited distribution in the Pacific Coast States, being confined to certain valleys. In California it is rarely encountered except in the San Joaquin and Sacramento Valleys. In these latter areas efforts are being made to destroy the breeding places of mosquitoes. Farmers' associations and inhabitants of towns are being taught to fight the mosquito, and these insects are being eliminated, so that in places where malaria formerly prevailed there are now few, if any, cases being reported. In this work the oiling of pools, screening of water containers, and drainage of breeding places has been practiced.

In the Central States economic conditions have led to the drainage of marsh lands, and consequently the land that was formerly a swamp is now under cultivation. During the past ten years these measures have had a noticeable influence in reducing the prevalence of the disease. In the Eastern States,

particularly Massachusetts, New York and New Jersey, systematic campaigns for the extermination of mosquitoes have been carried on. The two latter States, during 1906, enacted laws for the suppression of mosquito breeding places, and for the drainage of swamps and other lowlands. The American Mosquito Extermination Society, a national organization, has been actively engaged for several years in a campaign against these pests. It has been influential in securing the ditching and oiling of many low areas, and in addition distributes literature on the subject.

Coincident with the acceptation of the doctrine of the transmission of yellow fever by the *Stegomyia colopus,* measures were taken for the destruction of this mosquito, which has a beneficial influence in the elimination of anopheles breeding grounds and reduction of the malaria carrying mosquito.

INFORMATION REGARDING TRACHOMA. PRESENTED IN ACCORDANCE WITH THE PROVISIONAL PROGRAM, BY SURGEON-GENERAL WALTER WYMAN, U. S. PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

The increasing prevalence of trachoma in the United States attracted widespread attention for some years prior to 1897. Cases and outbreaks of the disease, especially among school children and the alien population, had been noted by numerous observers.

It was found to be rather frequent along the Atlantic seaboard, especially in our large maritime cities, and practically always in persons either of foreign birth or foreign parentage. It has been recognized for many years that the disease is transmissible from one person to another, and its presence was undoubtedly due to the importation of cases among arriving aliens.

Owing to the westward migratory movements of this portion of the population foci of the disease were established at different points in the interior of the United States. In certain restricted areas of Southern Illinois and in the mountains of Kentucky and West Virginia the disease has become epidemic. These are the only instances known in which the disease is endemic among persons of strictly American parentage, and even here the evidence is in favor of the belief that it was originally imported and has since been fostered by the comparative poverty and lack of medical facilities prevailing in those sections.

Fewer cases had been observed among native born Americans, and the increase mentioned above was attributed to the influx of a large alien population from countries whose inhabitants are ravaged by the disease.

During the past twenty-five years immigrants have come from as many countries. During the first fifteen years of this quarter of a century the bulk of immigration came from Northern Europe, principally Germany, Scandinavia, and the British Isles—countries in which trachoma is relatively infrequent. During the past twelve years the tide of immigration from Southern Europe has been steadily increasing until at the present time the larger part of the alien population arriving in the United States originates in Italy, Austria-Hungary, the Russian Empire, and countries bordering on the Northern and Eastern shores of the Mediterranean. This change in the source of arriving aliens no doubt accounted for any increase in the disease.

Prior to 1897 ophthalmologists and representative bodies urged that immediate steps be taken to prevent the further importation of trachoma in the belief that such precautions would be an important factor in the elimination of the disease from the country. In the examination of immigrants sufficient evidence had accumulated to prove the contagious character of the disease, and no doubt existed as to the seriousness of its sequellae. It was also believed that fresh importations would only serve to propagate the disease and throw additional burdens on the State.

The Surgeon-General of the Public Health and Marine Hospital Service therefore addressed a communication to the Commissioner-General of Immigration on October 30, 1897, calling attention to the contagiousness of the disease, and as a result, it was classified as "dangerous contagious" in accordance with the immigration law of 1891, thus making mandatory the deportation of all arriving aliens so afflicted.

Since that time thousands of aliens afflicted with trachoma have been certified by medical officers and excluded from landing at United States ports.

The physical and mental examinations of arriving aliens are made by medical officers of the U. S. Public Health and Marine Hospital Service who are responsible for the efficiency of such examinations. The examinations are conducted in conjunction with the inspection instituted by the Immigration Service and in accordance with official instructions issued for their guidance. The medical examinations are made by daylight, and never, except in an emergency, is artificial light used. The inspection is so arranged that the alien is subjected to a primary medical examination at which the eyelids are averted. At this examination every alien presenting symptoms of any disease is detained for further examination. These persons are examined a second time in rooms especially set aside for the purpose. At this time, records of physical defects are made for the information of the immigration inspectors and for future reference.

Cases of undoubted trachoma are immediately certified, and cases of acute inflammation of the conjunctiva presenting suspicious symptoms are held in hospital pending a definite diagnosis.

It is of the highest importance both in the interest of the alien and the State that a correct diagnosis be established in every case, as the certification of trachoma accomplishes the deportation of the alien concerned. Suspicious cases are, therefore, held in hospital under observation for a period of ten days or longer as may be necessary. Simple inflammatory conditions of the conjunctiva improve rapidly and are well within a few days, while trachoma is notorious for its chronicity and resistance to remedial measures.

In these examinations and in the subsequent disposition of patients great care is observed to prevent the spread of the disease to healthy persons. Antiseptic solutions are in constant use during the examination and the patients while in hospital are grouped in separate wards set aside for the purpose.

In addition to the measures taken at ports of arrival in the United States officers are stationed at some foreign ports to prevent the embarkation of persons suffering with trachoma or other dangerous contagious diseases. As a result of these examinations fewer cases are now found among arriving immigrants, as the steamship companies themselves make considerable effort to prevent the embarkation of persons so afflicted. This action on the part of the steamship companies is one of self-protection, as the immigrant is returned at the expense of the steamship company, and in addition the company is subject to a fine of $100.00 for the importation of each and every alien afflicted with a loathsome or dangerous contagious disease if it is established that the existence of such disease might have been detected by means of a competent medical examination at the time of foreign embarkation.

The beneficent results of the enforcement of the immigration laws are shown in the annual reports both of the Surgeon-General of the Public Health and Marine Hospital Service and of the Commission-General of Immigration during the past ten years. During the fiscal year ended June 30, 1906, alone, 29,600 cases of trachoma were prevented from embarking at foreign ports, and 1,600 cases of the disease were certified as having trachoma upon arrival. Statistics compiled by Dr. A. E. Davies of New York revealed the fact that prior to the classification of trachoma as a dangerous contagious disease by the United States Government in 1897, thus making mandatory the deportation of all aliens arriving who are so afflicted, the percentage of trachoma in half a million cases of diseases of the eye investigated by him was 4 per cent. Within three years after this restrictive measure was instituted an examination of nearly one hundred thousand cases revealed the presence of but a little over 2 per cent of cases of trachoma.

Health officers are alive to the importance of preventing the spread of trachoma among school children, and in many of the cities, especially those containing a large alien population, regular examinations are made, and children afflicted with the disease are debarred from the schools until they are cured. In some cities special hospitals have been established for the treatment of persons so afflicted.

It is easier to prevent trachoma than to cure it. When we consider that the presence of the disease in any area practically implies its previous importation and that in some sections of Europe from which immigrants come 60 per cent of all cases of blindness are due to this disease, measures looking to its exclusion need no defense. It is believed, therefore, that the best national prophylaxis for republics in the Western Hemisphere is the exclusion of aliens suffering

from trachoma. By this means the establishment of new foci is prevented, and the danger of its appearance in the public schools is diminished—an important consideration when we remember that the children of the present are to constitute the active producing members of the community of the future, and that the general status of the future community is dependent upon the degree of intelligence which we are able by education to confer upon our children. School children attacked by this disease must be excluded from school attendance for long periods at a time when their faculties can but illy afford to lose the training if they are to develop their highest qualifications as useful social units.

Finally, the arriving alien, by reason of his affliction, inherits an environment of comparative poverty and squalor. He is unable to contribute his due portion to the industrial and mental development of the state, and his very presence is, therefore, a factor in reducing the standard of the civilization of the country to which he comes.

REPORT PRESENTED BY DR. E. FERNÁNDEZ ESPIRO, DELEGATE FROM URUGUAY.

ORDINARY CONTAGIOUS DISEASES.

1. Among the ordinary contagious diseases most frequently observed in Paraguay are tuberculosis, typhoid fever, smallpox, scarlet fever, diphtheria, measles, and whooping cough.

We will treat of each of them commencing with tuberculosis.

Tuberculosis.

Of all the diseases which have been mentioned, the one that causes most victims and is most generalized, is unquestionably tuberculosis. In fact, figures relating to deaths from contagious diseases, during the last ten years, show that the number of deaths from tuberculosis amounted to 9,546, while the number of deaths caused by typhoid fever, scarlet fever, diphtheria and smallpox amounted to 1,983, 694, 669, and 559, respectively.

The following table shows the number of deaths during the aforesaid period:

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	962	1902.....	954
1898.....	909	1903.....	1,010
1899.....	842	1904.....	919
1900.....	917	1905.....	966
1901.....	907	1906.....	1,160
	4,537		5,009

Total for ten years.....9,546

The great difference observed between the mortality from tuberculosis and from other contagious diseases, has been noticed for some time, with the aggravating circumstance that it tends to be more marked from year to year, to such an extent that, the number of deaths from tuberculosis has almost equaled, in some rural departments, the total deaths from all other contagious diseases. However, we should call attention to the fact that this does not happen in Uruguay alone, but the same is true of other countries, and perhaps in a greater proportion, because the development of the disease is greater in said countries, and therefore, the average mortality is much greater.

Yet, it can not be denied that the spread of the disease continually increases, though not to an uncommon extent, but sufficient to particularly call the attention of the sanitary authorities to it.

In regard to the measures which have been adopted for combatting tuber-

culosis, I beg to state that until 1896 there was no sanitary provision requiring physicians to report cases of that disease. It was about the middle of said year that the ordinance making compulsory the report of contagious diseases, among which pulmonary and laryngeal tuberculosis was included, was promulgated.

Through one of the wise provisions of the rules and regulations of the Sanitary Law, the report of cases of tuberculosis was not allowed to be made public, so that the personnel of the Bureaus who receive the reports, are not allowed to make public the names or domiciles of the patients except to persons duly authorized.

After taking these measures by means of which the sanitary authorities have been able to discover many, if not all, of the cases of tuberculosis which have occurred, it became necessary to decree other provisions in order to generalize the information relating to the transmission of said disease, and to the precautions which should be adopted in order to prevent it.

With this end in view, the National Board of Health approved the following prophylactic measures in 1898:

General Rules

For Preventing the Spread of Tuberculosis by Persons Afflicted With Pulmonary and Laryngeal Consumption.

1. Of all forms of tuberculosis, pulmonary and laryngeal consumption are the two forms which more easily transmit the infection.

2. The infectious agent or microbe is found in the sputum of patients, and may transmit the disease when the sputum is dry.

3. When the sputum is dry, it spreads the infectious agent through the air, and becomes a part of the dust, and in entering the lungs by the respiratory organs, frequently finds favorable conditions for procreating the disease.

Persons afflicted with bronchitis or cough are more predisposed to contract the infection.

4. In order to prevent patients from spreading the infection, it is necessary to destroy the germs contained in the sputum as soon as they are expelled by the cough.

5. To obtain this result, the sputum should not be thrown in any other place than the cuspidor or other receptacle provided for that purpose.

6. The best cuspidor or receptacle is the one which allows the sputum to sink in such liquid as it contains, without sliding over the walls of the cuspidor.

7. Cuspidors should contain an antiseptic liquid capable of dissolving the sputum and killing the germs.

Lysol and creoline dissolved in the proportion of 50 grams per liter of water possesses both qualities, and have the advantage of not affecting metals.

8. When neither lysol nor creoline can be employed, the cuspidors must contain water, but in such case, since the sputum retains the liver germs, boiling water should be employed to wash the cuspidors.

9. The contents of the cuspidors should be emptied in cesspools, thus avoiding their overflow in any other place where they might become dry or come in contact with domestic animals, which can also contract tuberculosis and transmit the disease to persons.

10. Clothing and bedclothes used by the patients should be immersed in a solution of bichloride of mercury in the proportion of 1 per thousand, or boiled for a quarter of an hour before they are sent to be washed.

11. In general, every place where the patient has expectorated should be thoroughly washed with a solution of bichloride in the proportion of 2 per thousand, or with boiling water as circumstances may permit.

Care should be taken not to sweep the rooms, nor dust the furniture, but the rooms should be cleaned with wet rags immersed in the aforesaid solution before they are rung or dried.

Precautionary Measures Taken at Schools, Barracks, Asylums, Hospitals, Jails, Etc.

12. The use of cuspidors should be compulsory, both in the case of healthy persons and in the case of the sick.

Spittoons should be of earthenware, enameled iron or other similar material, and should contain water, or the aforesaid antiseptic solution, and must be kept absolutely clean.

Prophylactic Measures.

Unoccupied houses where consumptives have lived, should not be allowed to be leased again without first being officially disinfected.

14. In order to comply with the foregoing provision, the proper authorities shall notify the proprietors of the houses which should be disinfected.

15. When a pulmonary or laryngeal consumptive dies, a thorough disinfection of the patient's room should be made, without prejudice to also disinfecting the other rooms of the house.

In addition to these provisions, the National Board of Health has ordered that, at stated times, the disinfection of the houses occupied by consumptives be made, and to that end has issued the following rules:

1. Compulsory disinfection of the domiciles of consumptives who have been attended by the physicians of the Board of Health detailed for that purpose, and of those who apply to the dispensaries of the League against Tuberculosis.

2. The houses shall be partially disinfected fortnightly.

3. A receptacle and an antiseptic liquid shall be furnished in which to immerse the clothing used by consumptives, and said liquid shall be renovated whenever it shall be deemed advisable.

4. The disinfection shall be made officially, and to that end the Economic-Administrative Board shall take such measures as it may deem proper.

These measures, the application of which had to be limited to the houses occupied by consumptives who received free medical attendance, must necessarily be made applicable later on to other domiciles in the same condition, even though they are occupied by persons of means, because the National Board of Health so requires, and also because it should be so, as otherwise many occupied by consumptives would escape said periodical disinfection, which is just as essential as the final disinfection.

There is also in force an ordinance issued by the Economic-Administrative Board of the Department of Montevideo, which makes the disinfection of the clothes and bedclothes used by the patient compulsory, as well as the carpets, mattresses, and all furniture used by him, such as beds, bedroom tables, etc., sold privately or at a public auction.

It is evident that said provision has not been put in force for the sole purpose of preventing articles belonging to consumptives being used without having been previously disinfected, but that said provision applies also to articles used by patients of all contagious diseases; but since it meets one of the many demands of the prophylaxis of tuberculosis, I thought I would take advantage of this opportunity to call attention to it, the more so, since it refers to one of the several provisions applied for the purpose of entirely destroying the germs of said disease.

Below will be found another important ordinance relating to the sanitary vigilance of inns and dairies, and therefore, to the inspection and tuberculization of cows.

Ordinance Concerning the Sanitary Vigilance of Inns and Dairies.

Article 1. No animal that can be used in the exploitation of the milk industry, shall be allowed to be used in the inns or dairies of the Department, without the express consent, which shall be granted after a veterinary examination and the tuberculization of the animal, made by the personnel of the Veterinary Division of the Municipal Bacteriological Service.

Art. 2. The inspection referred to in Article 1 will apply to animals to be used at the inns of the city, at such place as the Board of Health may designate, where they shall be kept for inspection as long as may be necessary to determine the condition of their health.

Art. 3. It shall be the duty of the owners of inns and dairies to bring, at their own expense, to the place of inspection to which Article 2 refers, such animals as are kept in their establishments in the cases provided for by this ordinance or by the rules and regulations of the Service, and to furnish samples of the milk in order to make the analysis whenever the Bureau shall so direct.

Art. 4. The expenses of board, tuberculization, etc., incurred by the inspection prescribed in Articles 1 and 3, shall be borne by the owners of the animals, in accordance with such tariff as the Economic-Administrative Board may approve.

Art. 5. Animals which, after treatment by tuberculization, still show clinical symptoms of infectious tuberculosis, such, for instance, as cough, difficult breathing, sores on the teats, swollen glands, etc., and also when these symptoms permit the diagnosis to be made, even though reaction has not taken place.

a. When the diagnosis has been confirmed by the autopsy, the carcass shall be totally or partially destroyed, the residue belonging to the interested party.

b. When the condition of the meat warrants its use for consumption, its sale shall be authorized in accordance with the provisions in force regarding the matter.

Art. 6. Consumptive animals merely showing a reaction caused by the treatment by tuberculization, shall be rejected, and branded on the back of the left ear.

Suspected animals shall likewise be rejected, marking them so that the Bureau may easily recognize them.

Animals of the last class shall not be returned for inspection until after the lapse of a period of two months[1].

Art. 7. The classification of the two groups of animals mentioned in the foregoing articles, according to the result of the tuberculosis test, shall be made in conformity with the opinion accepted by the Experimental Health Institute (Ordinance of the National Board of Health No. 83).

Art. 8. The use and sale of milk from the animals referred to in Article 6, which shall only be kept in distant places—at least 5 kilometers—from the nearest inn or dairy, is hereby prohibited.

Art. 9. Neither shall said animals be worked in slaughter-houses where veterinary inspection is not made.

Art. 10. The owners of condemned animals shall receive therefor such equitable compensation as the Economic-Administrative Board may fix, deducting the amount charged for board, with the exception of animals notoriously sick, suffering from a severe cough, bad general condition, etc., and those which have been branded by the Bureau at previous inspections[1].

Art. 11. The Bureau shall direct the veterinaries under its charge, to periodically inspect all the establishments of the Department which supply milk.

Sick or suspected animals shall be removed at the earliest possible date, and sent to the proper place for inspection whenever the proper authority shall so direct.

Art. 12. At the request, and at the expense of the party in interest, the animals rejected by the Bureau shall be permitted to work at the place of inspection in accordance with the provisions of Article 5, paragraphs *a* and *b*, with the previous consent of the Northern Railway and Tramway Company.

Art. 13. It shall be the duty of the owners of inns and dairies to report to the Bureau directly or through the health officials, concerning all animals having visible symptoms of the disease, such as cough, fatigue, diarrhea, fetid excrements after parturition, leanness, and, more especially, any abnormal symptoms of the udder, and they shall likewise report immediately concerning those dying in the establishment.

Art. 14. The animals shall be kept entirely clean and well fed with forage of good quality, the use of the residues of starch factories, breweries, alcohol distilleries, sugar factories, musty or fermented feed, being prohibited, and the use of all kinds of substances capable of transmitting harmful effects to the milk or of altering its organoleptic character or unfavorably modifying its composition, are likewise prohibited.

Art. 15. The stalls and the receptacles used for feeding the animals shall be metallic, or of any other water-proof material, and there must be one for each animal and it must be kept entirely clean.

Art. 16. Whenever among animals kept in inns and dairies, any case of infectious disease develops, such as carbuncle, apthous fever, tuberculosis, etc., or repeated cases of tuberculosis occur among animals coming from the same establishment, the disinfection service shall disinfect the stable without preju-

[1]This provision was modified by an executive decree of December 8, 1903.

dice to the adoption of other necessary measures, and the owner, in addition, shall employ such sanitary measures as the Board of Health may require.

Art. 17. Such establishments as, notwithstanding the measures adopted, become contaminated and produce cases of tuberculosis, shall be closed within a period of six months, and shall not be reopened.

A similar decision shall be made immediately whenever the interested parties fail to comply with the provisions of the foregoing article.

Art. 18. Whenever a case of infectious disease occurs, the report of which is compulsory, such for instance, as smallpox, measles, scarlet fever, whooping-cough, typhoid fever, puerperal fever, erysipelas, pulmonary or laryngeal consumption, among persons living in the inn or dairy, or who are in contact with the personnel thereof, the prophylactic measures prescribed by the rules and regulations in force shall be applied, and the establishment shall be closed if it is deemed necessary.

The patients or convalescents of said diseases, as well as those having sore hands susceptible of contaminating the milk, shall be excluded from service in inns and dairies.

At the request of the Board of Health the personnel of suspected establishments shall be subject to an examination by the municipal physician, who shall report as to the measures which should be adopted in each case.

Art. 19. The person who milks the cow, before doing so, shall have clean hands, and see that the udder and teats of the animal are also entirely clean, and he shall also keep constantly clean the vessels and all kinds of receptacles in which the milk is gathered, measured and preserved.

All these receptacles shall be kept out of the barn in a suitable place protected from all contamination.

Art. 20. It shall be the duty of owners of establishments for the deposit or sale of animals, to report to the health officers the number of all cattle housed in them.

Art. 21. It shall be the duty of the health officers to visit daily said places, reporting to the General Inspection Bureau on the blank forms furnished for that purpose by the Municipal Bacteriological Service forwarding said report thereto on the same day.

Art. 22. Articles 1, 2, 4, 5, 6, 7, and 9 of the present ordinance shall be applicable to milch cows for private use.

In case private persons desire to have their cows inspected at home, they shall pay such additional amount as may be fixed for that purpose[1].

Art. 23. Such claims as may arise by reason of the application of this ordinance, and the annexed rules and regulations, shall be made in writing to the Board of Health within three days after the action taken by the Bureau, and after the expiration of that term no claim will be admitted.

Art. 24. The analysis and investigations required by the service established by this ordinance as well as the organization and management of said service, are under the control of the Municipal Bacteriological Service.

Art. 25. The Board of Health shall, as soon as practicable, require compliance with the provisions of this ordinance by all the establishments which supply milk to the department of the Capital, and shall provide the service in each district with such organization as it may deem advisable.

Art. 26. Until the sale and use of tuberculin is effected under certain regulations, the application of said substance, without the previous consent, in each case, of the Bureau in charge of the tuberculization service under such conditions as the same may establish, is prohibited[2].

Art. 27. Each infraction of the provisions of the present ordinance shall be punished by a fine of $10, except the provisions of Articles 18 and 19, the violation of which shall be punished in each case by a fine of $4.

Art. 28. All provisions opposed to the present ordinance are hereby repealed.

RULES AND REGULATIONS OF THE SERVICE OF TUBERCULIZATION AND VETERINARY INSPECTION.

Article 1. In accordance with the present rules and regulations each inn shall

[1]The resolution of August 16, 1902, of the Economic-Administrative Board, fixes the amount to be charged for inspection of animals on the premises at $3.00.

[2]See ordinance of August 20, 1901, on the preparation and sale of tuberculin.

be given a certain number, which the Bureau shall specify in a document issued to the owner of the establishment.

Said certificate shall be placed where the public can see it.

Art. 2. After the inspection service, referred to in Article 1 of the ordinance, has shown that the animals are in a healthy condition, and that they give milk of good quality, said service shall issue a certificate of health stating the number of the inspection, the description of each animal, and such other data as it may deem pertinent, without which requisite the animals shall not be admitted to the dairies.

Art. 3. The certificates of health shall constitute the sole evidence that the interested parties have complied with Article 1 of the ordinance concerning the sanitary inspection of inns and dairies, and shall be valid for a term of twelve months, but only for the inn whose number appears therein[1].

Before the expiration of this term, the animals in question shall be removed from the inn or dairy, or taken anew to the place of inspection, to be submitted to a new examination.

Art. 4. In the case of suspected establishments and until the same are in a complete state of sanitation, the examination of such animals as may be housed therein, shall be made again, six months after their admission.

In all inns and dairies, after the lapse of two months, the examination of animals admitted therein conditionally, may be ordered.

Art. 5. The certificate of health shall be posted either on a board with a glass or hinged cover, or they may be attached, one by one, to the leaves of a scrap book, which shall be kept permanently exposed in the barn or office in a place easily visible and accessible.

Art. 6. It shall be the duty of the owners of inns or dairies to show certificates of health of all the animals in their establishment whenever the officers of the Municipal Bacteriological Service, or of the Board of Health, shall so require.

Whenever, for any reason, they are unable to comply with this provision at once, they shall present said certificates to the Bureau within 24 hours.

Art. 7. Certificates of health that have been deteriorated, lost or become void by transfer, shall be replaced whenever the interested parties furnish the necessary data verifying that they have complied with the provisions of Article 1 of the ordinance, and by paying the amount of the new certificate fixed by the tariff.

Art. 8. Each inn or dairy shall be provided with a special certificate stating the date and result of the inspection made in said establishments.

Said certificate shall be placed in the office where the public can see it.

Art. 9. Any falsification of said certificates shall be punished in accordance with the law.

Art. 10. On making their daily visits to the inns and dairies, the officers or assistants of the Board of Health shall see if there are animals without the proper certificates and also whether any of them shows any visible symptoms of disease, and shall immediately report to the General Inspection Bureau, in order to take such action as may be deemed advisable.

Art. 11. In the case of inspection requested by private persons, the provisions of the present rules and regulations shall be equally applied, except those mentioned by Articles 1, 4, 5 and 8.

Art. 12. The decisions of the Bureau relating to the internal service, shall be made known to the interested parties by means of a notice fixed at the office of the Bureau of Veterinary Inspection.

Art. 13. The Bureau may, with the proper authorization of the Board of Health, substitute, at any time, the proof required by Article 1 by any other means that it may deem more advantageous.

CONCERNING REGISTRATION.

Art. 14. The registration referred to in Article 1 of the present rules and regulations shall be made every working day, with the exception of Saturdays and on the eves of holidays, at such hours as may be fixed ten days before.

The Bureau may limit the number of the registration, whenever the require-

[1]Modified by executive order of December 18, 1903.

ments of the service may demand, and may also authorize any days and hours in behalf of the interested party.

Art. 15. All animals brought to the Inspection Bureau shall bear their corresponding mark, without which they shall not be acted upon, and those unbranded may be branded at the place of inspection.

Art. 16. The registration, after paying the sum fixed by the tariff, shall be made in the order of entries, and those not appearing to make said registration during the office hours shall lose their turn.

Art. 17. Animals which, having been admitted to inns or dairies, have to be brought again to the Inspection Office by order of the Bureau, shall be exempt from the payment of the registration fee.

Art. 18. Animals rejected for other diseases than tuberculosis, and which are again brought to the inspection office within two months, are exempt from the payment of the registration fee, provided their owners, upon registering them, give the number corresponding to the previous registration.

The term of twelve months mentioned in Article 3 shall be counted, in such cases, from the date of the last tuberculization.

Art. 19. It shall be the duty of the owners of animals, or their representatives, to furnish all such data and documents as it may be deemed necessary to know, for the best carrying out of the service, such as the origin, destination, title of ownership, number of the certificate of the previous inspection, if any has been made, or the date of the same, etc.

The registration shall be denied when this requisite is not complied with, and those who make false declarations shall incur a fine.

CONCERNING PROCEEDINGS INCIDENTAL TO INSPECTION.

Art. 20. The animals shall remain under inspection at least a day and one-half, counting from the hour fixed for the beginning of the thermometric examination, and shall be delivered within twenty-four hours after the completion of the aforesaid term except in such exceptional cases as may require a longer period of time[1].

Art. 21. Animals suspected of having been recently subjected to the test injection, may be detained under inspection for a term of sixty days[2].

Art. 22. Whenever it may be proper and convenient the animals shall be delivered conditionally, and in such case they shall not, under any pretext, be removed from the inns or dairies, without the written permit of the Bureau.

Art. 23. Animals, the admission of which to inns or dairies has been authorized, shall be removed from the place of inspection on the same day the inspection was made.

A term of 24 hours shall be granted for the removal of rejected animals.

In all cases the additional time they remain in the place of inspection, shall be paid for in accordance with the tariff.

Art. 24. After five days shall have elapsed from the date on which the owner or manager of the rejected animal has been notified, it shall be considered abandoned, and the Bureau shall sell it at public auction, and after deducting such expenses as are caused, the remainder shall be deposited in the Treasury of the Board to the credit of the owner, for a term of thirty days.

CONCERNING THE SLAUGHTER OF THE ANIMALS.

Art. 25. The animals referred to in Article 5 of the ordinance on sanitary inspection of inns and dairies, shall be slaughtered within the term of ten days from the date of the confiscation.

Art. 26. The Bureau shall notify the owners three days in advance, the date of the slaughter of their animals, the autopsy of which they may witness, accompanied by a qualified veterinarian.

Art. 27. The skinning of the animals shall be at the expense of the interested parties, who shall immediately remove such parts as can be used and the hides, after the proper disinfection, and otherwise they shall be comprised in

[1]Modified by executive order of December 18, 1903.
[2]Repealed by an order of the Economic-Administrative Board of October 17, 1903.

the provisions of Article 24, and in accordance with paragraph *b* of Article 5 of the ordinance on sanitary inspection of inns and dairies[1].

Art. 28. Upon making the registration, the veterinarian connected with the Service shall appraise each animal, the amount being stated in the certificates of registration, in accordance with the provisions of Article 10 of the ordinance.

The amounts of the appraisement shall be as follows:

For first class, $40; second, $25; third, $15, and fourth, $8.

Art. 29. Such amount as is paid, in accordance with Article 10 of the ordinance, for animals having tuberculosis, as shown by the autopsy, shall represent one-half of the value according to appraisement; and for healthy animals the amount paid shall represent the total of the value fixed by appraisement, and in this case the carcass shall belong to the owner[2].

Art. 30. After confiscation has been decided upon, the owner or his representative, shall express his acceptance or opposition within 48 hours after the decision has been notified, and after the expiration of that period, the appraisement made by the Bureau shall be considered accepted.

In the case of opposition, the owner or his representative shall appeal to the Chief of the Service, who shall decide the question in view of the reasons set forth by the veterinarian.

Appeals may be taken from the decisions of the Chief before the Board of Health.

Art. 31. The Bureau shall deliver to the interested parties, as early as possible, the amount due him in accordance with the law, taking a receipt therefor, and paying the same out of the collected funds.

Art. 32. On using the sums collected, the Bureau shall render an account to the Board of Health of such amount as it may have disposed of for the payment of quotas, etc., and, in addition, shall deliver monthly to the Auditor's Office the proper vouchers.

Art. 33. A fine of $10 shall be imposed for each infraction of the provisions of these rules and regulations, and a fine of $4 for each violation of Articles 1, 5 and 8.

CONCERNING THE TARIFF[3].

For every animal that is registered up to the time of the registration, except the animals comprised in Articles 17 and 18, there shall be a charge of $1.50.

CHARGES FOR OVER TIME.

For each day in excess of twelve hours, for each animal.....	$0.30
For less than 12 hours, for each animal.....	0.20
For each duplicate of the certificate	0.20

INSPECTION OF INNS AND DAIRIES.

Decree Modifying the Ordinance and Rules and Regulation on the Matter.

DEPARTMENT OF THE INTERIOR,
MONTEVIDEO, *December* 18, 1903.

In view of this appeal against the ordinance and rules and regulations concerning inns and dairies issued by the Economic-Administrative Board of Montevideo;

Inasmuch as the opinion of the Board of Health coincides with that of the aforesaid Board concerning the efficiency and advisability of tuberculization; and

Whereas, agreeing with said Board of Health that the sale of tuberculous animals should not be allowed, both because they might be improperly used in dairies located outside of the Capital, and because with the products thereof they might

[1]By orders issued by the Economic-Administrative Board, under date of May 31 and July 2, 1904, it was prescribed that if the owners of animals to be slaughtered, after being duly notified, should fail to attend to witness the autopsy, and to skin the animals, the latter shall be considered abandoned, and the Bureau may order their sale at public auction, the skinning being at the expense of the buyer, and the sale being null and void if from the autopsy it should appear that the carcasses of the animals must be destroyed.

[2]Modified by executive decree of December 18, 1903.

[3]Modified by executive order of December 18, 1903.

compete with the inn or dairy keepers who have been compelled to dispose of said animals.

In case it should be proved that the animal has tuberculosis, it would not be just to compel the municipality to pay the full value of the animal, but the loss should be sustained mainly by the owner.

That, as regards the animals classified as suspected, the remarks of the Board concerning the inconvenience of their presence, in the fenced places of city dairies, are worthy of consideration, inasmuch as said presence favors the development of the disease, the existence of which was suspected; but the remarks of the appellants concerning the uselessness of branding said animals, since they can be identified by the brand of the owner, and the certificate of health, and also concerning the damage said brand causes them whenever it has not already been confirmed that the animals are actually afflicted with tuberculosis, are also worthy of consideration;

Inasmuch as the municipal authorities themselves recognize that the tariff in force could be modified without prejudice to the revenues, it is proper to grant said reduction, since these kinds of services should not become a source of revenue to the Government;

Now, therefore, the Executive Power, exercising the authority vested in him by Article 41 of the organic law relating to Boards, resolves to maintain the ordinance and rules and regulations from which an appeal has been made, with the following modifications:

1. Such cows as have been declared to have tuberculosis, shall be slaughtered, and the Board shall pay to their owners such value as the cows may have as beef cattle, deducting the amount received for such portion of the carcasses as is utilized.

Indemnization, as a milch cow, shall only be proper whenever it should be proved by the autopsy that the diagnosis was wrong.

2. The sanitary inspection shall not be prolonged more than three days, and the maximum charge for the keep of the cows in the place of inspection shall be 50 cents each.

3. The owners of dairies and inns shall be entitled to dispose of healthy animals without any other restriction than the proper notification to the Inspection Bureau, and the certificate of health will also be useful to the purchaser.

4. Animals which are simply suspected, shall not be branded and shall be identified by the certificates of health and the brands of the proprietor.

We should add that the importation of animals is subject to a veterinary inspection at the ports of the Republic, and that such animals as are afflicted with tuberculosis are either rejected or slaughtered.

Before closing my remarks, I wish to state that the Uruguayan League against Tuberculosis, a private institution established in 1902, has played and is playing an important part in the campaign against said disease, having earnestly endeavored to prevent its development among the poorer classes. To this end, said Institution has established and maintains three dispensaries in Montevideo, and five in the rest of the Republic, which are so many other centers of propaganda and distribution of the most elementary precautionary measures, and where the sick find proper medical attendance and suitable food.

The pecuniary means that at the disposal of said league derived from a monthly subsidy from the National Committee of Public Charities, from private donations, from fairs organized in behalf of said Institution, and from the amounts paid by the members thereof, have enabled said Institution to carry out some of its plans, and to extend into certain departments the services which it renders at the Capital to such consumptives as seek its protection and support.

During the year which will soon end, it has constructed a model dispensary, which is superior to any of those now existing in the other Latin-American countries.

Among the plans which the League is considering, the most important is the one relating to the establishment and operation of new dispensaries in such places in the city where the laboring classes, which furnishes the most cases of tuberculosis, are most numerous.

Dr. Joaquin de Salterain, the learned President of said Institution, has devoted his great learning, activity and perseverance to the service of said Institution, and, with the co-operation of his worthy companions of the Board of Directors, continues his humanitarian work, convinced that each day collective effort be-

comes more imperative because the disease in question progresses daily, and it is the duty of all to prevent its development.

TYPHOID FEVER.

Typhoid fever is another of the diseases which prevail in Uruguay, and the development of which is observed in certain months, that is to say from December to June of each year, with the peculiarity that said epidemics some times break out before the former month and end after the latter.

The greater increase of typhoid fever in summer and fall, and the disappearance of it in winter, is not only true of Uruguay but also of other countries, and it would be worth while to make some investigations concerning this point, in order to determine, if possible, to what cause its periodical paroxysms are due. Be it as it may, it is a positive fact that typhoid fever prevails in all of the departments of the Republic, though in greater virulence in some than in others.

The following table shows the number of deaths caused by typhoid fever during the last ten years.

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	302	1902.....	107
1898.....	217	1903.....	188
1899.....	122	1904.....	280
1900.....	146	1905.....	153
1901.....	129	1906.....	276
	916		1,067
Grand total.....	1,983		

It will be seen that the number of deaths decreased up to 1899; there was a slight increase in 1900, and again there was a decrease in 1901.

During the second five years, the increase was notable up to 1904; in 1905 there was a small decrease, while in 1906 there was a new increase.

In a word, we may say that the mortality during the second five years was greater than that of the first five years.

The measures adopted for combatting typhoid fever are stated in the following provisions:

NATIONAL BOARD OF HEALTH.

General Rules for Preventing the Contagion and Spread of Typhoid Fever, Approved at the Session of July 3, 1899.

I.

Concerning the Epidemic Development of Typhoid Fever.

1. Of all epidemic diseases prevailing in the Republic, typhoid fever is the one that follows the most regular, periodical and annual course.

2. In the Department of Montevideo the months least favorable to its spread are August, September, October and November. From the latter month, cases of this disease are more frequent until March and April, and then decrease gradually until August.

3. During the months that it is most prevalent (March and April), the rural districts suffer most from its ravages.

4. The conditions of the development of typhoid fever in the country are not yet sufficiently known, but it is likely that it follows there a periodical, general and similar evolution.

II.

Elements of Contagion and Means of Propagation.

5. The germs of typhoid fever are mainly found in the excrements of patients, and in certain stages, in the sputum, urine and pus.

6. The dejections and other vehicles of germs, namely, the sputum, urine and pus, contaminate the skin of the patients, their clothes and bedclothes, and transmit it to their attendants and to the articles used.

7. As the germs of this disease are not destroyed by the temperature of the room, and desiccation, and as they continue to live in the open air, as well as without it, the dejections, the articles, the clothes and persons contaminated become vehicles of contagion and spread the disease by the different means which favor the transmission, multiplication or diffusion of the contagious agent, such as water, soil, dust, dung, etc.

8. When typhoid fever forms foci, that is to say, when repeated cases occur in a zone, locality or house, it is generally due to the contamination of water through the dejections.

9. The deficient construction of cesspools and drains favor the contamination of water of springs, as well as of wells, because of the permeability of the same. Cisterns, though on a smaller scale, also render possible the contamination of the water they contain, since the walls thereof, as generally constructed, do not constitute an invulnerable barrier to the germs of typhoid fever.

10. In a place where the water supply is obtained from *cachimbas*, springs, creeks or brooks, a single patient may be the origin of a local epidemic, owing to the liability of said waters to become contaminated by the dejections of the patient, which are deposited in the neighborhood without having been previously disinfected.

11. The waters from rivers and brooks, though they become contaminated just as easily as those from springs, *cachimbas*, creeks and brooks do not transmit the disease so easily, either owing to the volume of water, to the natural purification in the long distance over which the water has to flow, or to the mechanical and chemical means at present used, as it happens, in the flowing water of Montevideo, the fact is that the presence of the typhoid germs has not as yet been detected in the waters of our rivers. The investigations of the kinds of water consumed in the houses in which there have been patients of typhoid fever, in the department of Montevideo, confirm this conclusion.

III.

Concerning Disinfectants.

12. The solutions recommended by the Board of Health are the following: A weak solution of bichloride of mercury in the proportion of 1 per 1,000 for washing the hands, which is a colorless or slightly pink solution when the bichloride capsules are used.

A strong solution of bichloride of mercury in the proportion of 2 per 1,000 for bedclothes, the cleaning of the furniture, floors, etc.

A solution of sulphate of copper in the proportion of 5 per cent (greenish), to disinfect the dejections and other matter expelled by the patient.

13. The vessels containing the solutions of bichloride as well as those of sulphate of copper should be of glass, porcelain, earthenware, enameled iron or wood. The receptacles of copper, iron, tin and zinc are destroyed by the bichloride, and only those of copper will resist the action of the sulphate.

14. In order to prepare the first two solutions, the most practical way is to employ the capsules of bichloride of mercury, each of which contains one gram of the active substance.

One of these shall be dissolved in a liter of water for the weak solution, and 2 for the strong solution.

15. When the disinfection is made officially in order to prepare the weak solution, it will be sufficient to mix the quantity delivered by the disinfecting officials with an equal quantity of water.

16. As the aforesaid solutions are poisonous, the disinfection of the utensils employed for taking food and the administration of medicines should be done with boiling water.

IV.

Precautions to Prevent Persons Having Typhoid Fever From Transmitting or Spreading the Disease.

17. The patients shall be isolated during the entire course of the disease.
18. The beds shall be placed in the center of the room.
19. All the furniture of the room, except that which is indispensable, shall be removed and disinfected, as well as the carpets, curtains, etc.
20. If the patient occupies a room containing much furniture and other articles, and another room is provided to be occupied by the patient, the room having the best conditions for isolation and light should be selected and should be previously prepared for the reception of the patient, leaving therein only the furniture absolutely necessary.
21. After the transfer of the patient has been effected, the first room occupied by him shall be thoroughly disinfected, just as in the case of a final disinfection, and the latter as well as the former shall always be made officially in the Department of Montevideo.
22. Special care should be taken that the chambers used during the night, and other receptacles in which the matter thrown off by the patient are collected, shall *always* contain a green solution of sulphate of copper in the proportion of 5%, and in a sufficient quantity so that it may entirely cover the matter thrown off by the patient, and this solution shall be renewed as many times as may be necessary.
23. All clothes or articles removed from the room of the patient shall be previously disinfected with a strong solution of bichloride of mercury, or with boiling water, as the case may be, and this should be especially done to the clothes sent to be washed.
24. The cleaning of the room shall be effected with rags soaked in a strong disinfecting solution, without sweeping the floor nor using the duster in order to remove the dust from the furniture.
25. The patients shall be kept thoroughly clean and his clothes, as well as the bedclothes, should be changed frequently.
26. The room should be frequently ventilated.
27. When the disease has run its course and the attending physicians think proper to suspend the isolation of the patient, the final disinfection shall be done officially.

V.

Precautions for the Purpose of Preventing Healthy Persons From Contracting or Transmitting the Contagion.

28. Only such contact with the patient as is absolutely necessary for his proper attendance, should be had.
29. Only the persons necessary to attend him shall be allowed to enter or remain in his room.
30. The patient shall be attended by as few persons as possible.
31. It would be advisable for the persons attending the patient to use an apron or, preferably, a blouse, in order to protect their clothes, and such clothes as have been used shall be disinfected with the strong solution already referred to.
32. The hands shall be washed each time contact is had with the patient or with the contaminated articles, immersing the hands in the weak solution.
33. The attendants shall neither eat nor drink in the room of the patient.
34. The persons attending the patient shall, before leaving the room, remove their aprons or blouses, wash and disinfect their hands with the weak solution, and rub the sole of their shoes on a rag soaked in the strong solution.
35. The persons attending the patient shall avoid having any contact with healthy persons before changing their clothes.
36. The clothes removed shall be ventilated and exposed to the sun for some time.
37. The inmates of houses in which there are persons afflicted with typhoid fever, and those living in the neighborhood, should boil their drinking water when it is obtained from a cistern, well, or spring, and especially when there are other cases of typhoid fever in the vicinity.

VI.

Precautionary Measures Which Should be Taken in Schools, Barracks, Jails Workshops, Etc.

38. Crowding in schools, barracks, jails, workshops, and generally in every building where persons gather in large numbers, shall be avoided, and the air shall be renewed in such places as are occupied, completely ventilating said places when circumstances permit.

39. Water-closets should operate regularly and be kept strictly clean, and shall be disinfected during the months of December to May, using for that purpose the solution of sulphate of copper in the proportion of 5%.

40. The water for drinking purposes should be frequently inspected at schools, barracks, and rural camps, and when the weather permits, cisterns shall be thoroughly cleaned and the necessary repairs made, observing if there are any filtrations, in which case the water for drinking purposes should be boiled.

Precautionary Measures in Camps.

41. The places used by troops when in camps for depositing the offal of their persons shall be located at a height on an opposite or different slope to the place where the drinking water supply is obtained.

42. No pits shall be dug for the excrements, but a ditch shall be opened daily which shall be narrow and shallow, and the contents shall be disinfected with the aforesaid strong solution of sulphate of copper, and the ditch used shall be covered again with the same earth excavated therefrom.

43. The place selected for washing the clothes should be below the streams from which the water supply is taken.

44. Should any typhoid fever case occur among the soldiers encamped, the drinking water shall be boiled while the troops remain, or until a reasonable period of time shall elapse, which shall be extended, more or less, according to whether the season is favorable or unfavorable to the spread of the disease.

45. This last interval shall be used to open new wells, to empty the old ones and disinfect them by whitewashing, using at the same time a process of disinfection for the hogsheads or barrels containing the drinking water.

VIII.

Measures of a General Character.

In the season in which typhoid fever usually develops, the Economic-Administrative Board and Auxiliary Committees shall double the viligance they exercise as to the places where dung piles, pits, springs and cisterns are located ordering the necessary repairs to be made so that they may properly operate, and be kept entirely clean.

47. The interior of inns or dairies, stables, tenements, etc. shall be whitewashed, complying with the rules prescribed regarding the number of inhabitants and the ventilation of the rooms.

48. The conditions under which clothes are washed shall be subjected to close inspection, and the proper instructions shall be given in order that said washing be done down stream, far away from the places from which drinking water is obtained.

49. Excrements shall not be allowed to be thrown on the slopes of water sheds from which the water supply of the town is taken, and for that purpose high places distant from habitations shall be selected.

SMALLPOX.

This disease, which formerly caused many victims both in the Department of Montevideo and the rural departments, and which for some time has prevailed in certain places in an endemic or sporadic form, having occasionally caused more or less important epidemics, in 1897 commenced to decrease, and had almost been eliminated in 1898, 1899 and 1900, but in 1901 it was imported again and spread in an epidemic form until the first months of 1903.

Since that time, the number of deaths began to decrease considerably, but commenced to increase again in 1905, having decreased in 1906, the figures concerning the mortality in the ten years from 1897 to 1906, give an exact account of the decrease of smallpox.

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	100	1902.....	244
1898.....	2	1903.....	5
1899.....	3	1904.....	26
1900.....	1	1905.....	146
1901.....	158	1906.....	9
	264		430
Grand total.....	694		

The increase of deaths caused by said disease in 1904 and 1905 is easily accounted for, because in those two years smallpox was imported again, and caused a small epidemic which broke out in Montevideo and extended into some rural departments. After this epidemic the cases of smallpox have diminished considerably and it would not be difficult to eliminate the disease entirely, since the sanitary authorities are endeavoring to enforce the measures adopted to combat said disease.

Notwithstanding the fact that there are only two provisions which render vaccination compulsory, the fact is that at present the former difficulties which were encountered in putting this preventative measure in force, do not now obtain. For this reason the number of persons vaccinated is daily increasing, so that every year a great number of persons become immune in the capital as well as in the country.

The provisions concerning compulsory vaccination to which we have referred, are the following:

Those of the general rules and regulations of the public schools of the State, which prescribe that children in order to be admitted to said schools, must have been previously vaccinated, and the rules and regulations concerning tenement houses, which read as follows:

"The manager of a tenement house shall not hereafter admit as tenant any person who has not been previously vaccinated, and shall forward a detailed statement to the Board of Health specifying the number of tenants who have not yet been vaccinated, or who were vaccinated ten years ago, in order that said Board of Health may take such measures as it may deem advisable, so that all such tenants may have the benefit of vaccination."

On the other hand, it has been prescribed that persons who enlist in the army, the police force, persons entering jails and those who are admitted into asylums, shall be vaccinated.

To prevent smallpox from being imported through maritime ports, the following ordinance concerning vaccination and re-vaccination of steerage passengers has been decreed:

NATIONAL BOARD OF HEALTH.
Ordinance 107.

MONTEVIDEO, *June* 25, 1902.

Whereas smallpox is a contagious disease which can be imported through maritime ports;

Whereas the sanitary authorities of the Republic have on several occasions been able to prove the importation of said disease by persons who have landed from vessels coming from abroad;

Whereas vaccination and re-vaccination should be adopted as prophylactic measures in order to avoid, as far as possible, the introduction of said disease;

Now, therefore, the National Board of Health, duly authorized, resolves:

Article 1. It shall be the duty of the sanitary officers, or those on duty at the lazaretto, as the case may be, to require the captains of steamers coming from abroad to furnish a bill of health issued by the proper sanitary authority of the port of departure as well as of those where the steamer touched, countersigned

by the Uruguayan consul, stating the number of steerage passengers vaccinated or re-vaccinated before embarking.

Art. 2. In case the vaccination or re-vaccination is effected during the voyage, the captains of the vessels shall so declare in writing, and shall sign said declaration together with the physician on board, delivering the same to the health officer at the port of arrival, with a list of the persons vaccinated or re-vaccinated.

Art. 3. The provisions of Article 1 shall govern even though smallpox does not prevail at the port of departure, or in those where the steamer touched, even though no cases of smallpox have occurred during the voyage.

Art. 4. After the visit or call of the health officer, all steerage passengers who are to land in Montevideo, shall be vaccinated and re-vaccinated, inasmuch as they are not comprised in the provisions of Articles 1 and 2.

Art. 5. Passengers who are going to land at other ports, and who want to stop in Montevideo, can do so provided they are comprised in the provisions of Articles 1, 2 and 3.

Art. 6. No steerage passenger shall be allowed to land unless he produces a certificate of vaccination, or allows himself to be vaccinated. If persons not vaccinated should land, the captains will be held responsible.

Art. 7. Such steamers as have had cases of smallpox on board, or still have them at the time of their arrival at the port, shall be subject to the measures specified in ordinance Number 27 of September 7, 1899.

Art. 8. Whenever the Board of Health shall deem it necessary, the vaccination and re-vaccination may be applied to passengers coming from the Argentine Republic, Paraguay or Matto Grosso.

Art. 9. This ordinance shall become effective as to vessels arriving after September 25.

In case of vessels having smallpox on board, that is to say vessels which upon arriving at the port, or during the time they remain there, have one or more patients or convalescents on board, the following treatment shall be prescribed:

(a) The landing of patients or convalescents in the lazaretto, whenever smallpox does not prevail in the city[1].

In the contrary case they may land in the port and be conveyed to their homes or to the house of isolation, according to circumstances[2].

(b) The vaccination of passengers going to Montevideo.

(c) Sanitary inspection on land.

In addition to said maritime sanitary measures, the National Board of Health has put in force the following prophylactic provisions:

NATIONAL BOARD OF HEALTH.

General Rules to Prevent Contagion and Spread of Smallpox, Approved at the Session of September 26, 1908.

I.

Concerning Vaccine and Vaccination.

1. Vaccination is the only known means for the efficient prevention of smallpox.

2. The preventative effects of vaccination are temporary, and it may be said that they last not more than ten years. After ten years, to maintain the effects of vaccination, re-vaccination is necessary.

3. Vaccination should be administered in infancy, and it should be added that smallpox is generally fatal among the aged.

4. At all times, and all ages, people who are not immune through vaccination, should be vaccinated. This is an imperative necessity especially in times of epidemics.

Victims of smallpox are those who generally do not avail themselves of the benefits of vaccination, as shown by the practice of a century.

[1]It is understood that smallpox prevails in the city whenever it shall have been proved that there are five or more separate foci in the city.

[2]No patient shall be transferred to tenement houses, or to rooms where many people live together.

5. Vaccination seems to have a beneficial influence on those afflicted with whooping-cough, inasmuch as it modifies in a favorable manner the course of the disease, and therefore this effect of vaccination should be taken advantage of.

6. When persons suffer from skin diseases they should consult a physician as to the advisability of vaccination.

7. In times of epidemics, there are persons who fear vaccination, erroneously believing that the latter favors the development of the disease; the contrary is the case, as vaccination is the surest means of avoiding it.

Even in case the vaccinated person contracts smallpox, which has not been entirely developed because it was in the period of incubation, vaccination will considerably attenuate its effects.

8. It frequently happens that young children, and even older persons, contract a disease commonly known as chickenpox, which is erroneously taken for smallpox, and then they neglect subsequent vaccination owing to this lamentable mistake. The disease in question is called varicella, a disease quite similar to smallpox, but the origin of which is entirely different, and does not in any way protect against smallpox, and therefore, vaccination should not be neglected on account of it.

9. Vaccination does not exercise any harmful influence on the health of the vaccinated.

10. The best vaccine is that obtained from heifers, such as that prepared and distributed by the Municipal Conservatory of Montevideo, and used by the Superior Board of Health of the Republic, in all its branch offices[1].

11. Persons are also vaccinated from the vaccine taken from other persons, but this is a dangerous practice which should be abandoned, because certain diseases may be transmitted by the use of such vaccine.

12. The animal vaccine obtained under the conditions accepted by the Conservatory of Vaccine cannot transmit any disease from the animal, since the latter is carefully examined while alive, and after it is killed in order to collect the vaccine.

13. Persons who have been afflicted with smallpox, lose, like those who have been vaccinated, their immunity after ten years, and it is quite necessary for both classes to be vaccinated periodically.

II.

Concerning Smallpox Epidemics.

14. Smallpox is a very contagious disease, and is developed epidemically and periodically in localities where there are many people who are not yet vaccinated or who have not been revaccinated.

15. The only sure means to prevent or check smallpox epidemics is vaccination and revaccination.

16. The isolation of patients powerfully contributes to diminish the spread of smallpox, and renders possible to check the course of an epidemic in its early stages, and gives time to vaccinate and revaccinate persons who are liable to contract the disease.

17. The longer the time elapsing from a smallpox epidemic, the greater the probabilities of its appearance and rapid spread.

III.

Conditions Favorable to Contracting the Contagion.

18. The following are predisposed to contract the contagion:

1. Those who have not been vaccinated or revaccinated.
2. Those who attend the patients or who are in contact with them.

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[1]The Conservatory of vaccine, and the Bureau of Sanitary Inspection, at Montevideo, the Departmental Boards, and the Sectional Boards of Health in the country, are the Bureaus charged with the distribution of vaccine.

Persons vaccinated in said office should report to said office from the fifth to the eighth day, in order to verify the results of vaccination.

The Municipal Board of Health furnishes free the services of the physicians who vaccinates, in homes where there are smallpox or varioloid patients.

3. Those touching the clothes or articles belonging to the patients or to their rooms.
4. Those who are in contact with the persons who attend the patients, or who have been in contact with them.
5. Those living in the same house.
6. Neighbors.

19. Vaccination, the isolation of the patients and a careful and thorough disinfection, observing the rules recommended, will avoid contagion within the scope of the action of each of these measures.

IV.

Elements of Contagion.

20. The germs of smallpox exist in the eruption, and retains its life in the scabs a long time after it has been thrown off or separated from the skin.

21. Since the eruption invades the mouth, the nostrils, and even the bronchial tubes, and saliva, the nasal mucus, and the expectoration, these also contain the contagious agent. Consequently, in order to prevent the spread and contagion of smallpox, it is necessary to apply suitable means to destroy the effects of all those products, following for that purpose the rules indicated in these provisions.

22. Smallpox patients transmit the contagion until all the scabs have completely fallen off.

23. It is during the period of the loosening of the scab that patients are most liable to transmit the contagion.

24. Smallpox is transmissible by the direct contact of the patient, and also through the persons and articles which have been contaminated.

25. It is also propagated from a distance through the air which wafts the contagious agent contained in the dust of infected places.

V.

Concerning Disinfectants.

The Board of Health recommends the use of the following solutions:

A weak solution of bichloride of mercury in the proportion of 1 per thousand, in which to wash the hands and to immerse the clothes in the early stages of the disease.

A strong solution of bichloride of mercury in the proportion of 2 per thousand, to disinfect the clothes during the period of suppuration, and until the scabs have entirely fallen off, and also for the disinfection of the products of expectoration, the cleaning of the floors, furniture, contaminated clothes, the vessels used for collecting the expectoration, and vomits, and the disinfection of the utensils used in the care of the patient, the room, etc.

27. In order to prepare these solutions, the most practical way is to employ tablets of bichloride of mercury, each of which contains 1 gram of the active substance.

One of them should be dissolved in a liter of water, in the case of the *weak solution*, and two, in the case of the *strong solution*.

28. When the disinfection is made officially, it shall be sufficient, in order to prepare the *weak solution*, to mix with an equal quantity of water that delivered by the officers who make the disinfection.

VI.

Precautions to Prevent the Patients from Transmitting or Spreading the Disease.

29. The patient should be completely isolated during the entire course of the disease, and until he has taken a bath or antiseptic lotions.

30. The bed shall be placed in the center of the room in order to prevent the patient from expectorating on the walls, and also to prevent the scabs from being introduced in the socles.

31. All furniture not absolutely indispensable shall be removed from the room and disinfected, as well as carpets, curtains, etc.

33. When the patient has been transferred to another place, the rooms shall be thoroughly disinfected, as in the case of the final disinfection, and both disinfections shall be made officially.

34. Special care shall be taken so that the scabs, the products of expectoration, the nasal mucus, and the saliva, be disinfected with a strong solution of bichloride of mercury in the proportion of 2 per thousand. To this end, porcelain, glass or enameled iron vessels, that do not affect said solution nor are deteriorated by its action, shall be used.

35. All articles removed from the room shall be previously disinfected with the weak, or strong solution, as circumstances may require.

36. The bedclothes, and clothes personally used by the patient, shall be immersed in a strong disinfecting solution before they are sent to be washed.

37. The cleaning of the room shall be effected with rags dipped in the strong disinfecting solution, and the floor shall not be swept nor the furniture dusted.

38. The patient shall be kept entirely clean, and his clothes as well as the bedclothes should frequently be changed.

39. The rooms shall be frequently ventilated.

40. On the disappearance of the disease, and when the attending physician should deem proper to suspend the isolation of the patient, the final disinfection shall be officially made.

VII.

Precautions to be Taken to Prevent Healthy Persons From Contracting or Transmitting the Contagion.

41. No more contact should be had with the patient than is absolutely necessary for his attendance.

42. Only the persons necessary to attend the patient shall enter his room or remain there.

43. The patient should be attended by as few persons as possible, and they must have been vaccinated, or revaccinated when ten years have elapsed since their first vaccination.

44. Only the attendants shall be allowed to enter the room.

Persons who attend the patient should wear an apron, or, preferably, a blouse, in order to protect their clothes, said apparel shall be changed often, and those which have been used shall be disinfected with the strong solution already mentioned.

46. The nurses shall wash their hands each time they come in contact with the patient, or with the contaminated articles, first with soap and then with the weak solution.

47. Eating or drinking in the room of the patient should be prohibited.

48. Before leaving the room the nurses shall remove their aprons or blouses, brush their clothes with a brush wet in the strong solution, wash and disinfect their hands with the weak solution, and rub the soles of their shoes on a rag soaked in the strong solution.

49. Persons attending the patient shall avoid putting themselves in contact with healthy persons until they have changed their clothes.

The clothes which have been changed and disinfected shall be properly ventilated and exposed to the sun for some time.

50. Persons who have not been vaccinated, or who have not been vaccinated for ten years, should not be allowed to call or visit houses occupied by smallpox patients.

VIII.

Precautionary Measures Adopted in the Schools, Barracks, Jails, Workshops, Etc.

51. At times when there is no smallpox, or when it is of infrequent occurrence, greater attention should be given to the means employed to avoid an epidemic by means of vaccination, because during epidemics vaccination only benefits the persons who submit to vaccination.

52. Children should not be admitted to schools who have not been vaccinated or revaccinated.

53. To be admitted to a school, children under ten years of age must have a certificate of vaccination, and those over that age a certificate of revaccination.

54. Valid certificates are those issued by physicians, the health authorities, and the municipal authorities.

55. In the barracks, war vessels, quartermasters' offices, etc., the newly enlisted men should be vaccinated immediately after enlisting. In this manner the breaking out of smallpox among the troops will be avoided, as well as the rendering unfit for service of a large number of men at a given moment, should they all be vaccinated at one time. The same course shall be followed in workshops.

56. All persons admitted to poorhouses, insane asylums, correctional prisons and penitentiaries, and, in general, to every establishment where the stay of the inmate is not temporary, shall be vaccinated as they are admitted.

GABRIEL HONORÉ, *Secretary.* JOAQUIN CANABAL, *Chairman.*

SCARLET FEVER.

Scarlet fever is one of those diseases that almost always has preserved its sporadic nature. However, on certain occasions, it has developed epidemically in Montevideo and in some of the rural departments.

It may be said that in the first six years of the last decennial, only isolated cases occurred, a circumstance which will account for the great difference noted between the mortality of that period and that of 1903, 1904, and 1905, during which the disease was at height. Lately, in 1906, it commenced to decrease, and the number of deaths was reduced to twenty-five.

In spite of the aforesaid increase of the epidemic, which could be compared to that which occurred from 1894 to 1896, the fact is that scarlet fever has not eclipsed, in the last few years, the list of mortality from contagious diseases, by the number of deaths it has caused, as shown by the following figures:

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	2	1902.....	3
1898.....	0	1903.....	75
1899.....	1	1904.....	373
1900.....	0	1905.....	79
1901.....	1	1906.....	25
	4		555
Grand total.....			559

This disease is subject to the sanitary provision governing the other contagious diseases, such as the compulsory report of the cases which occur, the isolation of the patient in accordance with the provisions of the rules and regulations of sanitation on land, and the disinfection of the rooms occupied by the patient, as well as that of their clothes and other articles supposed to be contaminated.

DIPHTHERIA.

This endemic disease, which used to develop epidemically in a threatening form, is one of those which has been most easily checked, and with the measures employed the mortality has decreased considerably.

The satisfactory results obtained by limiting considerably its development, shows clearly the beneficial influence of the sanitary measures adopted, and it shows at the same time that said measures are more efficient than is generally believed.

The following table shows the mortality during the last ten years:

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	144	1902.....	24
1898.....	94	1903.....	42
1899.....	53	1904.....	89
1900.....	48	1905.....	76
1901.....	50	1906.....	49
	389		280
Grand total.....			669

The following rules and regulations contain the provisions prescribed to prevent the contagion and spread of diphtheria·

NATIONAL BOARD OF HEALTH.

General Rules for Preventing the Contagion and Spread of Diphtheria, Approved at the Session of May 26, 1898.

I.

General Remarks.

1. Diphtheria is a contagious disease characterized by the formation of membranes which can be developed in the mucous membranes exposed to the air, namely, the eyes, mouth, nose, etc., and in wounds, scratches and ulcerations of the skin.

2. The most frequent seat of the disease is the throat, and then it is called diphtheria pharyngitis, or simply diphtheria.

From the throat diphtheria may extend or spread to the nose, the larynx and the bronchial tubes, which often happens. When the disease attacks only the larynx, or when it extends to the same, it is called croup.

Therefore, croup and diphtheria are two different names of the same disease.

3. The germ of diphtheria is found in the membrane whatever may be the seat of the disease. When diphtheria invades the throat, the nose or larynx, the products of expectoration, the saliva, and the mucus from the nose constitute vehicles, *par excellence,* for the spread of the contagion, and therefore, the greatest care should be taken to destroy the germs which said products contain.

After the disappearance of the membrane, the germs continue to live in the mouth of the convalescents for a longer or shorter period of time, and consequently may be a cause of danger to all.

II.

Conditions Favorable to the Contagion.

4. Diphtheria occurs more frequently among children, but can be contracted at all ages.

5. Persons having very large or inflamed tonsils, are predisposed to the contagion.

Children often afflicted with sore throat should receive special attention.

III.

Concerning the Treatment.

6. The anti-diphtheric serum is the most efficient treatment for combatting diphtheria.

7. The serum prepared by the institute of experimental hygiene, possesses all the qualities required.

8. The treatment by means of the injections of the anti-diphtheric serum, is the more efficient the sooner it is applied, and saves the life of a great many patients when used immediately after the disease is developed.

9. The injections of the serum serve to prevent contracting the disease, and should be administered to the children who remain in the foci of the epidemic where they can not avoid the contact of the patient or the persons attending them.[1]

IV.

Disinfectants.

10. The Board of Health recommends the use of the following solution:

A weak solution of bichloride of mercury, in the proportion of 1 per 1000 for washing the hands, and in which to immerse clean or partially contaminated clothes.

A strong solution of bichloride of mercury, in the proportion of 2 per thousand for disinfecting the products of expectoration, for cleaning the floors, furniture, the contaminated clothes, the vessels used for collecting the products of expectoration, and the vomit, and also the disinfection of utensils employed in attending the patient, etc.

11. The best practical means of preparing these solutions is to use tablets of bichloride of mercury, which contain 1 gram each of the active substance.

One tablet shall be dissolved in a liter of water in the case of the weak solution, and two in the case of the strong solution.

V.

Precautions to be Taken to Prevent Patients From Transmitting or Spreading the Disease.

12. The patient shall be entirely isolated during the course of the disease, and shall be kept in comparative isolation for a period of four weeks after being pronounced cured.

13. The bed of the patient shall be placed in the center of the room to prevent him from expectorating on the walls. These provisions will permit the persons attending the patient to move freely in the room.

14. All the furniture of the room, except that which is absolutely necessary shall be removed and disinfected, as well as the carpets, curtains, etc.

15. If the room occupied by the patient contains much furniture and other articles, and he is transferred to another room, the room having the best conditions for isolation and light, shall be selected, and shall be prepared for the reception of the patient, keeping therein only such furniture as is absolutely necessary.

16. After the patient has been transferred, the first room occupied by him shall be thoroughly disinfected, as in the case of the final disinfection, and both shall be made officially.

17. Special care should be taken to prevent the mucous from the nose, vomits and the saliva from being thrown out of the receptacle containing a strong disinfecting solution of bichloride of mercury in the proportion of 2 per thousand. To this end porcelain, glass, or enameled iron vessels, which do not affect the aforesaid solution, nor deteriorate by the action thereof, shall be used.

18. There shall be placed on the bed of the patient a piece of oilcloth, or rubber cloth, to protect the bed, and it shall be frequently disinfected by wiping it off with a rag wet in the strong disinfecting solution.

19. Everything removed from the room of the patient shall be previously disinfected with the weak solution, or with boiling water, as may be deemed advisable.

20. The bedclothes and clothes of the patient shall be immersed in boiling water, or in the strong disinfecting solution, before they are sent to be washed. The room shall be cleaned with rags soaked in the strong disinfecting solution, without sweeping the floor or dusting the furniture.

22. The patient shall be kept entirely clean, and both his clothes and the bedclothes shall be changed frequently.

23. The room shall be frequently ventilated, preferably when the rays of the sun penetrate therein.

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[1]The anti-diphtheric serum prepared by the Health Institute will be found in all the drug stores of the Republic in sufficient quantities to meet the first requirements.

24. When the disease has run its course and the attending physician deems proper to discontinue the strict isolation of the patient, the final disinfection shall be officially made.

VI.

Precautions to be Taken to Prevent Healthy Persons From Contracting or Transmitting the Contagion.

25. No more contact shall be had with the patient than that absolutely necessary to attend him.

26. Only the persons necessary to attend him shall be allowed to enter or remain in his room.

27. Persons attending the patient shall wear an apron, or preferably a blouse, in order to protect their clothes, and they shall frequently change and disinfect those they have used with the aforesaid strong solution or with boiling water.

28. The attendants shall wash their hands whenever they come in contact with the patient or with contaminated articles, first with soap and afterwards with the weak solution already mentioned, and the same shall be done with the face when necessary.

29. Neither eating nor drinking shall be allowed in the room of the patient.

30. Persons who attend the patient shall remove their aprons or blouses, brush their clothes with a brush wet in the strong solution, wash and disinfect their hands with the weak solution, and rub the soles of their shoes on a rag soaked in the strong solution before leaving the room of the patient.

31. The nurses shall avoid having any contact whatever with healthy children, except after having changed their clothes.

The clothes which have been used and changed shall be disinfected, ventilated and exposed to the sun for some time.

32. Children with large and swollen tonsils should not be allowed to visit houses where there are persons suffering with sore throat, nor should the latter be allowed to visit the houses of the former until four weeks shall have elapsed from the date of their entire recovery, because there are some mild forms of diphtheria the real nature of which are not easily detected.

33. Children who have been in contact with diphtheria patients shall be closely watched, and their throats should be examined at least twice a day.

VII.

Precautionary Measures to be Taken in Schools.

34. As the proper authorities, namely, the Board of Health of Montevideo, acquire such data as are furnished by the report blanks, they shall inform the respective principals of the schools, as to the registered children who are afflicted with diphtheria.

35. Without prejudice to the foregoing, the addresses of the children affected with this or other contagious diseases, shall be published, and the principals of the schools shall take daily notice of these reports.

36. It shall be the duty of principals of schools to determine the reason for the absence of children from school, and if the non-attendance is caused by illness, to determine the nature of the latter.

37. No child living in the same house with persons suffering from diphtheria, shall be admitted in the schools until the final disinfection has taken place. If the child has been suffering from diphtheria, it shall not be again admitted until four weeks shall have elapsed from the date on which its domicile was officially disinfected.

38. The principals shall take care to keep away from the schools all children suffering with throat trouble, and whenever the non-attendance of the children is prolonged for that reason, they shall only be admitted by each child furnishing a certificate signed by the physician stating that it has not been ill with diphtheria.

39. During the hours of recess, and after the pupils have gone out, the classrooms shall be ventilated by opening the doors and windows thereof.

40. The floors shall not be swept, but the dust shall be removed by means of wet rags or sponges.

41 The class rooms shall be washed weekly, followed by disinfection with a solution of bichloride in the proportion of 1 per thousand.

42. Care should be taken that the clothes of the children are clean before they enter the class rooms, and they shall be required to wash their hands after recess.

Measles.

We shall make only a few remarks concerning this disease, which is the most common of all contagious diseases, and also the one which has most frequently assumed an epidemic character, though of comparative mildness.

The following table shows the deaths caused by said disease during the last ten years:

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	39	1902.....	62
1898.....	86	1903.....	60
1899.....	40	1904.....	3
1900.....	37	1905.....	14
1901.....	58	1906.....	97
	260		236
Grand total.....			496

following rules contain the provisions adopted for preventing the contagion and spread of said disease.

National Board of Health.

General Rules for Preventing the Contagion and Spread of Measles, Approved at the Session of July 20, 1898.

GENERAL REMARKS.

1. Measles is a contagious disease which spreads very easily.

2. It especially attacks children, though any person may contract it, especially if he did not have it during infancy.

3. Measles is generally a mild disease, though subject to serious complications, especially in the case of infants, or when there are many patients of the same disease in the same room.

4. It is transmissible during the entire course of the disease, and especially during the period of its invasion, which precedes, from four to seven days, that of the eruption.

5. The period of invasion sometimes is not detected, or the symptoms of the disease are attributed to a different malady.

6. This period is characterized by a watering of the eyes, nasal catarrh, hoarseness, and frequent coughing or sneezing, accompanied by a moderately high fever, sometimes quickly disappearing and difficult to detect except by the use of the thermometer.

ISOLATION.

7. All persons having the aforesaid symptoms shall be considered as a suspected case of measles, and action shall be taken in accordance with these rules.

8. Persons having the measles, or those suspected of having said disease, shall be isolated in rooms without decorations or ornaments, and having only the necessary furniture, and the most indispensable articles for the attendance of the patients.

Well ventilated and lighted rooms shall be preferred for effecting the isolation.

9. If the patient is a nursing infant, the person nursing it shall avoid contact with other children. In this case it is preferable to remove the healthy children from the house whenever the isolation of the patient has been made from the period of the invasion of the disease, at least four days before the eruption has appeared.

10. While a patient having measles is in the eruptive period, healthy children should not be removed to other houses until after a period of twelve days shall have elapsed from the last contact had with the patient.

11. The isolation should be prolonged at least until five days after the eruption has entirely disappeared, and admission of the healthy children into the room of the patient, shall only be allowed after the disinfection and ventilation of the contaminated room and clothes.

12. Persons attending the patients shall have no contact with other persons until they have disinfected their hands, and their outer clothing.

13. In times of epidemics of measles, the contact of children with those of other families shall be prevented, and more especially of those children in whose houses there are persons suffering with measles, and they should be prevented from attending the places where there is a large number of persons.

Disinfecting Measures.

14. The disinfectant which shall be preferably used is a solution of bichloride of mercury in the proportion of one gram per liter.

It is easily prepared by dissolving a tablet of bichloride containing the quantity above mentioned in a liter of water.

15. The same solution shall be used for disinfecting the clothes and bedclothes, and boiling water may also be employed for the same purpose.

Measures to be Taken in Schools.

16. Any child having the symptoms mentioned in paragraph 6, shall be kept away from school, and shall only be admitted therein after five days shall have elapsed, and when the symptoms which have prevented his attendance have entirely disappeared.

17. If during the time the child is away from school, symptoms of eruption set in, and his absence is prolonged on that account, the child shall be newly admitted only after twenty days shall have elapsed from the date it was denied admission to the school, or fifteen days from the date the eruption set in.

18. Should the attending physician declare that the child has the measles, the child shall only be admitted to school ten days after the disinfection of the infected house shall have been made.

19. After the symptoms which characterize the period of invasion have been confirmed, or when a pupil is reported to have the measles, it shall be the duty of the teachers to carefully examine, at the time of entering the school, all pupils occupying seats adjacent to the pupil suffering from the measles, and the teachers shall proceed in accordance with the provisions of paragraph 6, if they detect the aforesaid symptoms.

20. Healthy children living in houses where there are persons with the measles shall not go to the school until after the pupils have left the same.

21. The class rooms shall be ventilated by opening the doors and windows thereof.

22. The floors shall not be swept; the dust shall be removed with a wet rag or sponge.

23. The class rooms shall be washed weekly, and disinfected with a solution of bichloride of a strength of 1 to the thousand.

24. The children's clothes shall be clean before allowing them to enter the class, and after recess they shall wash their hands.

WHOOPING COUGH.

Whooping cough is the disease which most rarely develops in an epidemic form, yet it has sometimes developed in that form, though not in all the departments of the Republic.

On the other hand these epidemics have not been of great importance, and consequently the cases frequently observed have been isolated cases which have not formed any epidemic foci.

The number of deaths has been greatly diminished during the last ten years, shown by the following table:

DEATHS.

1897 to 1906.

First five years.		Second five years.	
1897.....	58	1902.....	23
1898.....	12	1903.....	66
1899.....	20	1904.....	19
1900.....	43	1905.....	13
1901.....	65	1906.....	52
	198		173
Grand total.....			371

As in the case of other contagious diseases, the following rules have been prescribed concerning whooping cough:

General Rules for the Prophylaxsis of Whooping Cough.

The contagious agent of whooping cough is found in the matter expelled by the cough and the vomit. This disease attacks especially children, and the younger the latter are the more dangerous the disease.

I.

Precautions to be Taken in Order to Prevent the Patients of Whooping Cough From Transmitting the Disease.

1. The patients shall be isolated during the whole course of the disease, and until three weeks shall have elapsed from the date of the complete disappearance of the cough.
2. Care shall be taken to collect the products of the expectoration and vomit in wooden, earthenware, iron or porcelain vessels containing a solution of sulphate of copper in the proportion of 50 per thousand, and in case this should not be possible, the places where such products have been thrown shall be cleaned with boiling water.
3. The clothes and textiles contaminated should be immersed in boiling water.
4. The floors of the places frequented by persons having whooping cough shall not be swept, and the dust shall be removed one or more times a day by means of wet rags which shall be disinfected.
5. All curtains, carpets and furniture which are not absolutely indispensable shall be removed from the dormitory of the patient.
6. The rooms shall be ventilated often, especially in the morning, and during the hours in which the rays of the sun may penetrate therein.
7. The mattresses and bedclothes shall be exposed to the sun and the open air.

II.

Precautions Which Should be Taken in Order to Prevent Healthy Persons From Contracting the Contagion.

A. Private Measures.

1. Healthy children shall be kept from their suspected or sick companions.
2. Children should be forbidden to attend places where there are many people assembled.
3. The mouth and the nose shall be frequently disinfected with a solution of boric acid in the proportion of 4 per hundred, mixed with a quantity of boiling water equivalent to one-half of the solution.
4. It shall be the duty of persons attending children with whooping cough to be entirely clean and to disinfect their mouths and noses frequently with a solution of boric acid.

Clothes that have been contaminated with matters thrown off through expectoration and vomit, shall be properly disinfected.

B. Precautionary Measures to be Taken at Schools.

1. The class rooms shall be entirely ventilated by opening the doors and windows during recess hours, and after the pupils leave.
2. The floors shall not be swept, but the dust shall be removed by means of a wet rag or sponge.
3. The class rooms shall be washed weekly, after which they shall be disinfected with a solution of bichloride in the proportion of 1 per thousand.
4. Care should be taken to see that the children wear clean clothes before entering the class room, and they shall be required to wash their hands after recesses.
5. Every child with symptoms of whooping cough shall be kept away from the school, and shall only be admitted when it presents a medical certificate showing that the child is not afflicted with said disease, or that three weeks have elapsed since its recovery therefrom.
6. The confirmed cases shall be reported to the principals of the schools, so that they may watch such children as live in houses occupied by those afflicted with the disease.

Exotic Diseases.

II.

We designate by this name such diseases as do not exist in the country, and which have been imported, or may be imported hereafter, such as yellow fever, cholera, the bubonic plague and beri-beri.

As to yellow fever and cholera, we would have nothing to add to what we said in the report presented to the First International Sanitary Convention, which was held in Washington in 1902, but, inasmuch as, since then, there have been adopted provisions of an international character in order to prevent the importation of said diseases, it seems to us that it would be proper to make a brief review of the epidemics of yellow fever and cholera, and also of the appearance and course of the bubonic plague, before we refer to the aforesaid provisions.

Therefore, we shall commence our statement with yellow fever, this having been the first of the exotic diseases which invaded our country, and was epidemically developed at Montevideo.

Yellow Fever.

Yellow fever was not known in Uruguay until 1857. Its importation, which occurred in the month of February of said year, was made through some infected vessels which had arrived from Rio de Janeiro, and which probably were not kept in strict isolation, inasmuch as several sailors broke away from the isolation and soon after contracted the disease. From that moment, new cases were more and more frequent, and were spread through different places of the city and mainly in the low grounds of the city near the bay.

The epidemic that was then developed lasted until the month of June, causing about 1,000 deaths.

After many years, yellow fever was again imported from Rio de Janeiro. The epidemics which occurred in 1872 and 1873, the only ones after 1857, did not last so long nor were they of such a malignant character. The first of them broke out in January, and ceased in the month of March, having caused 142 deaths; the second also commenced in the month of January, and disappeared in the month of May after having caused 329 victims.

The fourth and last epidemic, also imported from Brazil, and which occurred in 1878, may be considered as the mildest of all of them and of the shortest duration. Indeed, it only caused 40 deaths, commencing in February and disappearing in May. Subsequently no more cases of yellow fever have been reported, except one that occurred in Montevideo in January, 1903. When the sanitary authorities were advised of the existence of said case, they immediately adopted the proper measures to prevent the spread of the disease.

From this brief review, it will be seen that Uruguay has been free from said disease since 1878, in spite of the fact that there have been great epidemics of yellow fever in Rio de Janeiro, and notwithstanding the yearly increase in the number of infected vessels arriving at the port of Montevideo.

There is no doubt that if strict sanitary vigilance had not been observed on vessels coming from said country, it would have been very difficult to prevent new invasions of the disease during such a long period of time.

Fortunately the danger has continually decreased since the sanitary conditions of Rio de Janeiro commenced to improve, and it is hoped that said danger will entirely disappear if the new processes which have been employed to exterminate yellow fever continue to give equally good results as those secured heretofore.

Cholera.

Ten years after the appearance of the first epidemic of yellow fever, cholera broke out, having been imported from Genoa by a vessel on board of which several cases occurred during the voyage. After completing its quarantine and securing free practique, the first case occurred among the passengers who landed in Montevideo from said vessel.

This epidemic commenced in the month of December, 1866, and disappeared in the month of May, 1867, after having caused 128 deaths.

The second epidemic, which was also imported, and of greater importance than the previous one, since it extended to several rural departments, commenced in December, 1867, and disappeared in April, 1868.

The number of deaths caused during that time amounted to 2,955.

Another epidemic occurred in 1886, which like the second one, spread to some of the most important cities of the interior of the country. It commenced in November and disappeared in March, having caused 535 deaths.

The fourth and last epidemic broke out in January, 1895, and disappeared in May of the same year, having caused 105 deaths.

In these last two epochs (1886 and 1895), cholera was imported, as it was in the other instances, by persons coming from infected ports.

The Bubonic Plague.

Until 1901 there had been no cases of bubonic plague in Uruguay. The first that occurred was in the second half of January of said year, the victim having been the foreman of one of the custom house warehouses, where a large number of rats had died.

The bacteriological examination which was made, soon demonstrated that the patient had the bubonic plague, the same as the rats found dead. After isolating the patient and adopting the proper precautionary measures, the occurrence of other cases was prevented.

After a period of six months in which good sanitary conditions prevailed, two new cases occurred. The investigations made in order to determine its origin, demonstrated that one of the patients came from a bakery which had just received a shipment of cloth bags from another similar establishment of Asuncion, Paraguay, where there had occurred cases of the bubonic plague, and that the latter had visited the house of the former. As soon as the second epidemic was checked, some time elapsed before new cases of said disease occurred until April, 1902, when it was discovered that in other customhouse warehouses, some dead rats had been found. After it was proved that they were affected with the plague, and the sanitary authorities having learned that there were in said warehouses a lot of coffee bags which had been brought from Rio de Janeiro, it was ordered that said bags should be destroyed by fire, and substituted with new ones.

The four laborers who worked in that operation were taken sick immediately, and two of them died.

Two months later, there occurred another case in the person of a laborer of a mill, but it was impossible to discover the origin of the contagion.

Since that time all the investigations made for the purpose of determining whether the new cases could be attributed to the reimportation of the germs of the bubonic plague, were unsuccessful, because the sanitary authorities were not able to prove that the patient had contracted the disease through having received or handled contaminated articles.

For this reason it was supposed that perhaps the contagion had remained in the rats, having been transmitted by them to persons. Whether this is true or not, the fact is that the bubonic plague has not been epidemically developed in Montevideo, as has happened in other countries, nor has it formed more or less important foci, nor has it extended to other localities. In addition to the above, the only cases discovered have been in one of the infected houses where there had previously been a patient having a complication of pneumonia and the plague.

Therefore, it can be truthfully said, that the bubonic plague in Montevideo has been characterized by its sporadic form, and by the slight mortality it has caused.

The following table shows the number of cases and deaths which occurred from 1901 to 1907:

Cases and Deaths From Bubonic Plague.

1901 to 1907.

Year.	Cases.	Deaths.
1901	3	3
1902	8	5
1903	3	0
1904	7	5
1905	2	0
1906	6	2
1907	18	8
	47	23

In Montevideo, the same as in other cities, it has been noted that the majority of the patients of the bubonic plague were persons employed in custom houses, bakeries, vermicelli factories, mills and domestic fruit deposits where bags with cereals are frequently received, and in which rats some times enter. It has also been observed that the greatest number of cases occur in summer and autumn, that is to say, during the seasons in which the work in the aforesaid establishments is increased, and when the trade in cereals is most active.

In order to complete this statement of data, we will add the provisions relating to the prophylaxis of yellow fever, cholera, and the bubonic plague, calling attention to the fact that said provisions are none other but those agreed upon by the delegates of the Argentine Republic, Brazil, Paraguay, and Uruguay, when they met at Rio de Janeiro for the purpose of studying and discussing the bases of the International Sanitary Convention of 1904.

We transcribe only such provisions as relate to land and maritime prophylaxis, without prejudice to mentioning some others that are especially interesting.

Title II.

Concerning Land Prophylaxis.

Art. 15. Whenever the infected locality is situated near the frontiers of the contracting countries, the precautionary sanitary measures shall be applied in accordance with the following principles:

a. The mail between the infected country and those not infected shall not be interfered with, sanitary limits and land quarantine being hereby abolished.

b. The high contracting parties reserve the right to limit the places on the frontier through which the transit of passengers and merchandise may be effected.

c. Passengers shall be subjected to medical inspection and the sanitary authorities may prohibit the passage of the suspected patients or convalescents of any of the aforesaid diseases.

d. Passengers shall be under vigilance for the period of time corresponding to that of the incubation of each of the diseases, the importation of which it is sought to prevent.

e. In the case of cholera or the bubonic plague, the clothes in general and all such articles as are susceptible of transmitting the disease, shall be thoroughly disinfected.

In other articles of these rules and regulations it has been prescribed that the sanitary vigilance of first and second class passengers, shall be effected on land, and that of the steerage passengers shall be exercised in their quarters on the ships, under such restrictions as the sanitary authorities may deem advisable.

On the other hand, it has been decided not to delay the admission of the mails, subjecting to disinfection only postal parcels.

In addition to the above, such sanitary measures as might be necessary to apply to vessels coming from countries not belonging to the convention, must be in accordance with the provisions contained therein.

From the foregoing, it will be seen that the Convention of Rio de Janeiro has accepted the most liberal of sanitary regimes, omitting the vigilance of first and second class passengers in the lazarettos or on board the vessels, and allowing the admission of the cargo without any restriction. Therefore, it may be said that it differs from other conventions by the fact of having abolished entirely the old sanitary practices which are gradually disappearing, and by having recognized that what was formerly done at lazarettos or on the vessels, can now be done on land without thereby endangering the sanitary condition of the country.

Beri-Beri.

We have little to say concerning this disease, because it is now more than seventeen years since a case has occurred in Montevideo, owing to the fact that the landing in the country and attendance of beri-beri patients in the ordinary hospitals is prohibited.

Before 1889, that is to say when there was no sanitary provision prohibiting the admission of said patients into general hospitals, such patients frequently were admitted and attended, especially at the English Hospital, the greater number of them being patients who landed from Brazilian vessels belonging to the Navy.

It was after that time that it was prescribed that such patients should be attended at the lazaretto, and since then all patients of beri-beri arriving at the port must be transferred to said establishment, in accordance with the provisions of the rules and regulations of Maritime Sanitation.

The majority of the cases occurring in the last few years have come from merchant vessels, mainly from certain ports of North America, such as Pensacola, Mobile, etc.

From 1902 to 1906, the number of beri-beri patients arriving at the port of Montevideo and landing at the lazaretto, amounted to 32, as will be seen by the following tables:

Beri-Beri Patients Landed at the Lazaretto of Isla de Flores.

Year	Cases
1902	6
1903	2
1904	10
1905	5
1906	9
	32

Concerning Sanitary Treatment of Vessels Infected With Beri-Beri.

(Rules and Regulations of Maritime Sanitation.)

Art. 47. Vessels infected with beri-beri shall be subject to the following sanitary treatment:

a. Landing of the patient or patients in the lazaretto for such treatment as may be proper, which shall be applied while the patient is isolated.

b. The disinfection of the clothes of the passengers and crew in the stove provided on board the vessel, in the presence of two officers representing the sanitary authority, or in that of the officers of the lazaretto, according to circumstances.

c. The free practique of the vessel as soon as the disinfection is completed.

Malaria.

This disease does not exist in Uruguay, and such cases as sometimes occur come from countries where malaria is endemic.

We shall treat granulous conjunctivitis or trachoma in a separate chapter, in order to state that it is a disease which has been observed for a long time in the Orphans and Foundling Asylum of Montevideo, but which at present has not only diminished, but is about to disappear, since the isolation of the patients has been prescribed.

Such cases as oculists have occasion to treat are isolated cases which heretofore have not formed foci.

III.

Sanitation of the Port of Montevideo.

In addition to the construction work of the port, carried out so that the harbour of Montevideo may be provided with all the necessary means of easy access and sufficient shelter, in order that vessels may load and unload without encountering the inconveniences and difficulties met with in open ports. Besides other no less important work relating to sanitation have been effected—work commenced in 1903, the greater part of which was completed during the present year.

The object of said work was to avoid the drainage of sewerage into the bay, and to facilitate the drainage of a well populated zone not having a system of sewers. Consequently, in order to obtain this result, it became necessary to construct two great water conduits, and some auxiliary conduits, to receive said sewerage, as well as the waters coming from the new wharves, and a part of the rain water, and convey them to the southern coast of the River Plate.

Simultaneously with those works other accessory works have been completed, namely, the cleaning deposits of the water conduits, which have a capacity of 10,000 liters of water each, the emptying chambers, and common emptying conduits, air holes, storm spouts, and ventilating chimneys.

Of the two great water conduits the main conduit is 4,571 meters 67 centimeters, of which 1,362 meters 60 centimeters have been constructed in the form of a tunnel in the rock.

On the south side it empties into Paraguay street, and thence in a northerly direction through Ibicui Street, and General Rendeau Avenue, to Tenientes Street, and thence in an easterly direction through the same street and that of Cuñapini to República Street, where it originates. The following auxiliary water conduits connect with this main water conduit: On the left with that of Orillas del Plata Street, which ends in Florida Street, and with that of Miguelete Street, which extends to Dayman Street. On the right, it connects with that of Miguelete Street, and New York Street. The length of said tributaries is 2,132 meters 12 centimeters.

The secondary water conduit begins where one of the tributaries of the principal water conduit ends, that is to say, in Orillas del Plata, and Florida Streets. From thence it follows to Rampla Street, and then it turns and runs through Piedras Street, and reaches Juan L. Cuestas Street, through which it passes until it empties into the river through Guaraní Street. It has a length of 2,198 meters 48 centimeters, of which only 1,473 meters 48 centimeters have been constructed owing to the fact that the works of the filling of the port have not yet been finished. This is the reason why only one of the drains has been finished, namely, that of Tenientes Street, which connects with the main drain.

The cost of said important work was estimated at $1,000,000, of which $692,037.30 has been spent, thus leaving $307,962.70 for the work not yet finished.

Sanitary Works in Rural Departments.

The studies made relating to the sanitation of cities and important towns of the Republic, which it was impossible to undertake until now, have just been started in some departments in conformity with a decree issued by the Government in July of the current year.

In said decree are set forth the reasons which have been borne in mind in order to hasten the preliminary works, as well as the aims of the Government

on directing that said works be effected in accordance with a general plan of sanitation, which shall be completed within a short time.

In order to carry out everything relating to said works, a National Bureau of Sanitation shall be established, the founding of which the Government will request of the Congress, as well as the means necessary for the execution of such work as will be proposed at the proper time.

As above stated, the preliminary steps have already been taken by certain departments, the conditions of which are favorable to the establishment of two water supply systems, and disposal of sewage without great difficulty. It can, therefore, be said that the sanitation of the important towns of the coast and interior of the Republic will be carried out without delay, inasmuch as that is the wish of the Executive Power.

The decree referred to is as follows:

MONTEVIDEO, *July* 16, 1907

Whereas: 1. Sanitation Works can not longer be delayed, and demand special attention on the part of Governments, because of their highly humanitarian aims, by virtue of which society contracts a debt with its members;

2. That their immediate execution in our Republic should be and is the constant aim of the present administration;

3. That, consequently, and notwithstanding the different provisions now existing here and there in the laws relating to the founding of the National Board of Health, of the National Department of Engineers, and of the Economic-Administrative Boards, the Executive Power prepares a bill relating to the general sanitation of all centers of population of our territory, and with the simultaneous appropriation of funds, which will render possible to commence without delay the solution of such an important problem in accordance with the great advancement that science and experience has taught us on the matter—a solution which it is not possible for a single administration to carry out in all its extent, inasmuch as it comprises several phases that are different stages of a well accentuated character, and which individually are of the utmost importance;

4. That while the said law is being prepared and approved, not only is there not any objection in starting and hastening as much as possible said preliminary studies, in order to fix and plan the most necessary and suitable drainage and sanitary works, thus uniting and properly directing the works urgently demanded by public health, and for which there exists a special public need.

5. That the National Department of Engineers, in view of its numerous scientific tasks, has not sufficient personnel to undertake alone such preliminary studies, and that, on the other hand, the magnitude of the general plan of sanitation of our cities and towns, considered from its many phases, demands the establishment of a special bureau provided with a certain autonomy, and certain powers of its own, to which shall be entrusted the exclusive study and solution of the many questions of a technical, sanitary, administrative and legal character, connected with the aforesaid plan or project.

6. That without giving to the General Bureau of Sanitation such ample and complete organization as the same may be entitled to, when the law referred to has been approved, it is possible, without any difficulty so far as the Administration is concerned, to now outline a plan of organization, establishing with a limited technical personnel a division which, later on, when circumstances permit the carrying out, without difficulty, the proper program of the Executive Power, will serve as a training school.

7. That in view of the above, and bearing in mind that the duty of this latter personnel should, for the time being, be limited to determining the general trend of the preliminary studies to the sanitation plans, and to carrying out simple topographical operations, making, at the same time, the proper hydraulic tests and superficial geological surveys of a general character.

The President of the Republic decrees:

Article 1. Until the National Bureau of Sanitation is organized in accordance with the respective law, the approval of which the Executive Power shall recommend in due time, the National Department of Engineers shall establish a technical division for making the preliminary studies on sanitation works.

Art. 2. The personnel of said division, for the time being, shall be as follows:

1. A technical expert familiar with said preliminary studies, and especially

competent and of great experience in the preparation, arrangement and execution of sanitary plans by modern processes.

This special technical expert shall be the chief of the corresponding division and his services shall be engaged in due time by the Department of Public Works, which is hereby authorized for that purpose.

2. Three operators.
3. Three draftsmen who shall act as assistants to the operators.
4. Four laborers for each operator.

The services rendered by this personnel shall not be regarded as those of regular Government employees.

Art. 3. The compensation of the said personnel are fixed in the following amount, and shall be paid as expenses and not as salary:

1. The chief of the division shall receive a monthly amount, which, including the special traveling expenses, shall never exceed $300.
2. The operators shall receive $120 each.
3. The assistant draftsmen shall receive $80 each.
4. The laborers shall receive $25 each.

The transportation expenses of said personnel to the places where they have to make said studies, shall be borne by the State.

Art. 4. The instruments, tools, utensils and other necessary appliances for effecting said studies, and preservation of landmarks, shall be supplied by the National Department of Engineers.

Art. 5. It shall be the duty of the Chief of the National Department of Engineers, to issue, in accord with the Department of Public Works, the general and private instructions concerning the character of the studies to be made, the manner in which the same can be carried out and the preservation thereof, as well as the number and manner in which the plans and other data shall be presented.

Art. 6. Until the expenses incurred by the sanitation studies are included in the proper budget, they shall be charged in equal parts to incidental expenses of the departments of the Interior and Public Works, to be reimbursed as soon as the Congress shall make the proper appropriation for said works.

Art. 7. The studies ordered shall be undertaken in groups of three centers of population, beginning with Mercedes, San José and Minas, followed by Salto, Paysandú, and Durazno, to be continued with others to be designated in due time.

Art. 8. Let it be communicated, inserted in the proper register, and published.

Water Supply.

The first steps taken asking the Government to provide the City of Montevideo with a good water supply were started in 1867, but the works which were planned to that end were not completed until the middle of 1871, and shortly afterwards the new system was inaugurated, the importance of which was immediately acknowledged, not only because the city lacked a proper supply of water at that time, but also because the only water that could be used was obtained from cisterns and wells imperfectly constructed.

The installation of the present system of water supply from the Santa Lucia River, dates from that time. The water is brought from a place situated at a distance of 58 kilometers from the city. From that place the water is conveyed to four decantation reservoirs, having an aggregate capacity of 54,000,000 liters, and from thence it is carried to the purifying apparatus and filters, and it is finally conveyed to three distributing reservoirs, which have a capacity of 60,000,000 liters. In addition to said reservoirs, which are installed in a place called Las Piedras, at a distance of 40 kilometers from Montevideo, there are two others in a place called Blanqueada near the city, having a capacity of 500,000 liters, and serve to supply water to the towns of Union and Maroñas, which constitute a part of the Department of Montevideo.

In order to purify and filtrate the water, the Company that supplies the water has at its disposal the aforesaid decantation reservoirs, together with three apparatus of the Anderson type, and five filters of 1,200 square meters each, which can supply up to 21,500,000 liters in 24 hours. The Anderson apparatus, the object of which is to diminish considerably the quantity of bacteria and of organic matter, can purify 22,500 cubic meters in an equal period of time.

The two reservoirs which receive the filtered water have a capacity of 17,000,000 liters, that is to say, 8,500,000 liters each.

In addition to the above installation, a house is being built at the place where the principal establishment is located, and a new machine will be set up there, which will do the double work of extracting the water from the river, and pumping the same into the purifying apparatus, and at the same time, after the water is purified, it will pump it into the distributing reservoir of Las Piedras.

On the other hand, the preliminary works are being done in order to lay a line of steel mains, having a diameter of 0.76 meters, which will be parallel to the line which runs to the Santa Lucía River, and to the aforesaid reservoir, and another line of cast iron mains, having a diameter of 0.457 meters, from that point to Montevideo.

The drawings will show the route over which said lines will be extended.

The mains which distribute the water are laid in all the streets of the city, and in a considerable part of the suburbs. They are growing daily in extent, because branches are frequently laid in those places where new buildings are constructed.

The demands for the installation of the water supply service increase in the same ratio, because nearly all of the new houses require said water service.

The number of houses provided with the water supply service is 20,000. Of these only 14,000 are now using the water supply. The average daily consumption during the previous year was 8,200,000 liters.

During the same year the analysis made by the Municipal Chemical Laboratory gave an average of 1.86% of organic matter, a much larger proportion than that allowed in other countries which have stricter provisions concerning the matter than we have.

MARITIME DISINFECTING STATION.

A short time after the International Sanitary Convention of Rio de Janeiro was held, the National Board of Health conceived the plan of establishing a disinfecting plant at the port, so that the clothes of the passengers might be disinfected there, in case it were necessary to do so, instead of carrying out that operation at the lazaretto of the Isla de Flores where it has always been done.

With that end in view, it applied to the Government, and obtained the support of the same, in order to commence the works relating to the preparation and presentation of the plans of said work, and for the purpose of carrying out the same.

In accordance with what the Board of Health has already decided, said building will consist of two stories: In the lower one there will be constructed the different sections of the disinfecting plant, such as the offices for the personnel, a place for disinfection by moist heat and chemical agents, together with its corresponding deposits for the disinfecting agents, formaldehyde generators and atomizers, rooms for passengers and their baggage, and finally lavatories, baths and toilets. On the second floor there will be the necessary rooms for the offices of the Sanitary Inspection of the port, which is in charge of the maritime sanitary service.

It goes without saying that the carrying out of said work, in which the Board of Health is deeply interested, will be of the utmost usefulness, inasmuch as it will not only facilitate the application of the sanitary treatment, whenever it may be necessary to do so, but also because when the disinfection of the clothes and baggage shall be made on land, it will not be necessary to transfer the passengers to the lazaretto, and thus cause them an unnecessary delay in landing.

On the other hand, when the construction of said building is completed, the maritime sanitary officers will reside in a place more suitable for the fulfilment of their duties.